

# A DICTIONARY OF SCIENTIFIC TERMS

PRONUNCIATION, DERIVATION, AND DEFINITION OF  
TERMS IN BIOLOGY, BOTANY, ZOOLOGY, ANATOMY,  
CYTOLOGY, GENETICS, EMBRYOLOGY, PHYSIOLOGY

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## PREFACE

IT was thought desirable that there should be available to students and others interested in the Biological Sciences an up-to-date work somewhat on the lines of Stormonth's *Manual of Scientific Terms* (1879, republished 1903). The subjects selected for treatment are Biology and its allies: Botany, Zoology, Cytology, Genetics, Embryology, Anatomy, Physiology; some terms in Bacteriology and Palæontology are included. Specific, generic, ordinal, and other systematic names of plants and animals have necessarily been omitted, nor could references to the sources of terms be listed in a volume of moderate size.

After compilation of most of the primary lists and completion of a small number of terms, the work was handed over to I. F. and W. D. Henderson, who prepared the First and Second Editions, and added to the definitions of nearly ten thousand terms those of some fifteen hundred new terms. Further revision was undertaken in the preparation of the Third Edition, and a list of abbreviations occurring in biological literature was added. Many definitions were amplified or modified, and the number of terms and cross-references was very considerably augmented, in the Fourth Edition, and a list of equivalent units of measurement was introduced. The text was again expanded in the Fifth Edition. In the present, Sixth Edition, the text has been further revised and extended.

The method of spelling is in the main that used in Britain, but due attention is paid to American orthography, by means of cross-references or by reproducing in the original lettering terms culled from scientific literature published in the United States. Spelling, however, is not static, as may be illustrated by the tendency to substitute *e* for the diphthongs *ae* and *oe*, and by compound words which may be written as two separate words, or hyphenated, or integrated as one word.

In the statement of derivation of terms, Greek and Russian words have been transliterated, as science and medical students are seldom acquainted with those languages. On the advice

of one authority on Greek, the transliteration of certain combinations of letters represents the sound rather than the exact letters of the original, hence the occurrence of such words as *brangchia*, *hydor*, etc.

Pronunciation, upon which there can never be universal agreement, is the least satisfactory portion, and is likely to remain so. Quite apart from natural differences in Scottish, English, and American utterance, pronunciation is subject to different fashions in different centres of learning. Moreover, pronunciation is subject to continual fluctuations; in the case of Latin terms, for instance, there is a trend toward the Continental type of pronunciation. The accepted position of the accent also varies in different localities and from one generation to another. Some of the alternative styles of pronunciation given will doubtless be regarded by the purist as faulty or definitely wrong, but their inclusion seems justified by the law of common usage.

The accretion of additional terms might have been dealt with in the form of Supplements, but with the generous consent of the Publishers, the work has been reset for each edition in order to retain the facility of reference afforded by an unbroken alphabetical arrangement, and to allow of revision, compression, or amplification of the text of the previous edition.

Innumerable publications have been probed for new terms and for new meanings which have been attached to existing terms. Thanks are due to many individuals who, during the past thirty-six years, have furthered the work by suggestions and criticisms. The preparation of each new edition has also been essentially facilitated by the courtesy of the staff of various libraries, particularly of the Library of the University of Edinburgh; and of the Argyll County Library, during preparation of the present edition.

This Dictionary now deals with approximately fourteen thousand terms. However, as I. F. Henderson pointed out in the Preface to the Second Edition, "a work of this nature must inevitably remain subject to limitations of time and resources".

J. H. K.

## SOUND-SYMBOLS USED IN PRONUNCIATION

The sound-symbols have been made as simple as possible, only the broader differences in vowel-sounds being included. The phonetic spelling following each term represents a general indication of the prevailing varieties of pronunciation rather than a critically exact reproduction, as the key-words themselves have by no means a universal interpretation.

ā	as in	rate.	ō	as in	no.
ă	„	rat.	ö	„	not.
â	„	far.	ô	„	form.
ch	„	church.	o	„	anatomy.
ē	„	he.	oi	„	toy.
ĕ	„	hen.	oo	„	good.
é	„	her.	ow	„	cow.
g	„	go.	s	„	so.
gw	„	guano.	sh	„	fish.
ī	„	pine.	th	„	thin.
î	„	pin.	û	„	pure.
j	„	gem.	û	„	nut.
k	„	cat.	y	„	yard.
kw	„	queen.	z	„	maize.
ng	„	sing.	zh	„	vision.



# ABBREVIATIONS

A . . . androecium	bot. . . botanical, botany
A . . . argon	B.P. . . British Pharmacopoeia
a. . . anode	b.p. . . boiling point
a. . . anterior	Br . . . bromine
a. . . abundant (occurrence of species)	B.T.U. . . British thermal unit
a. . . adjective	C . . . carbon
Å . . . Ångström unit	C. . . centigrade; Celsius
aapm. . . amphiapomict	C' . . . ( <i>centum</i> ) hundred; century
A.C., a.c . . alternating current	C . . . corolla
ACTH . . adrenocorticotrophic hormone	c. . . ( <i>circa</i> ) approximately
adv. . . adverb	C.A. . . chronological age
act. . . ( <i>aetatis</i> ) age(d)	Ca . . . calcium
Ag . . . silver	ca. . . cathode
alt. . . alternate	ca. . . ( <i>circa</i> ) approximately
alt. . . altitude	Cal. . . large calorie(s)
Al . . . aluminium	cal. . . small calorie(s)
Am . . . ammonium	c.c. . . cubic centimetre
amph. . . amphimict	Cd . . . cadmium
anal. . . analysis	Ce . . . cerium
anat. . . anatomical, anatomy	Cel. . . Celsius
ant. . . anterior	cel. . . cellulose
APH . . . anterior pituitary hormone	cent. . . hundred; centigrade
APL . . . anterior-pituitary-like hormone	c.e.s. . . central excitatory state
apm. . . apomict	c.i.s. . . central inhibitory state
appl. . . applied to	cf. . . compare
aq. . . water; aqueous	cg., cgm. . . centigram(s)
Ar . . . Arabic	Cl . . . chlorine
A.S. . . Anglo-Saxon	c.l. . . corpus luteum
As . . . arsenic	cm. . . centimetre(s)
atm . . . atmosphere, atmospheric	c.mm. . . cubic millimetre(s)
Au . . . gold	cm/s . . . centimetres per second
A-V . . . atrioventricular	CO . . . cardiac output
av. . . average	Co . . . cobalt
Az . . . azote (nitrogen)	col., cols . . . (bacterial) colony, colonies
B . . . boron	conc. . . concentrated, concentration
B. . . <i>Bacillus</i>	conch. . . conchology
Ba . . . barium	C.O.V. . . cross-over value
Bact . . . bacterium, bacterial	cpd. . . compound
bar. . . barometric	cpl. . . carpel
Bi . . . bismuth	Cr . . . chromium
B.I. . . buffer index	Cs . . . caesium
biol. . . biological, biology	c.s.f. . . cerebrospinal fluid
B.M.R. . . basal metabolic rate	Cu . . . copper
B.N.A. . . Basle nomina anatomica	cu., cub. . . cubic
	D . . . deuterium

## ABBREVIATIONS

d.	( <i>dexter</i> ), right	G	. . gynoecium
<i>d.</i>	dextrorotary	g.	. . gram(s)
<i>d.</i>	dominant ( <i>appl.</i> species)	gal.	. . gallon(s)
Dan.	Danish	$\gamma$	. . . ( <i>gamma</i> ) microgram
db.	decibel(s)	gen.	. . genus
D.C. d.c.	direct current	geog.	. . geographical
deg.	. . degree(s)	geol.	. . geological
dg.	. . decigram(s)	Ger.	. . German
diam.	. . diameter	Gk.	. . Greek
dil.	. . dilute	gm.	. . gram(s)
<i>dim.</i>	. . diminutive	g.-mol.	. . gram-molecule
DNA	. . deoxyribonucleic acid	G.M.T.	. . Greenwich Mean Time
doz.	. . dozen	gp.	. . group
dr.	. . drachm(s), dram(s)	gr.	. . grain(s), gram(s)
Dut.	. . Dutch	gr. n.	. . Gram-negative
dwt.	. . pennyweight	gr. p.	. . Gram-positive
E	. . east	GSH	. . glutathione
E.D.	. . effective dose	gt., gtt.	. . ( <i>gutta</i> ) drop, ( <i>guttac</i> ) drops
eff.	. . efferens, efferent	H	. . hydrogen
<i>e.g.</i>	. . ( <i>exempli gratia</i> ) for example	H°	. . hydrogen ion concentration
embr.	. . embryological, embryology	Hb	. . haemoglobin
E.M.F.	. . erythrocyte maturing factor	He	. . helium
e.m.f.	. . electromotive force	herb.	. . herbarium
end.	. . endosperm	h-f.	. . high-frequency
entom.	. . entomological, entomology	Hg	. . mercury
eos.	. . eosinophil	hg	. . hectogram(s)
equiv.	. . equivalent	Hgb	. . hæmoglobin
E.R.S.	. . erythrocyte sedimentation rate	hor.	. . horizontal
esp.	. . especially	hr, hrs	. . hour, hours
est.	. . estimated, estimation	H.W.	. . High Water
$\eta$	. . ( <i>eta</i> ) viscosity	hyb	. . hybrid
<i>et al.</i>	. . ( <i>et alii</i> ) and others	hypoth.	. . hypothetical
F	. . fluorine	I	. . incisor
F.	. . Fahrenheit	I	. . iodine
F.	. . French	<i>ib., ibid.</i>	. . ( <i>ibidem</i> ) in the same place
F <sub>1</sub> , F <sub>2</sub> , etc.	. . 1st, 2nd, etc. filial generation	Icel.	. . Icelandic
f.	. . female	ichth.	. . ichthyology
<i>f.</i>	. . frequent (occurrence of species)	ICSH	. . interstitial cell-stimulating hormone
F.D.	. . focal distance	<i>i.e.</i>	. . ( <i>id est</i> ) that is
Fe	. . iron	in.	. . inch(es)
flr(s)	. . flower(s)	inf.	. . inferior
fm	. . fathom	infl.	. . inflorescence
f.p.	. . freezing point	<i>i.g.</i>	. . ( <i>idem quod</i> ) the same as
FSH	. . follicle-stimulating hormone	irid.	. . iridescent
ft.	. . foot; feet	It.	. . Italian
fth.	. . fathom	I.U.	. . international unit(s)
fur.	. . furlong	I.W.	. . isotopic weight
		J.N.D.	. . just noticeable difference
		K	. . calyx
		K	. . potassium
		ka.	. . kathode
		KC	. . kilocycles

kg.	kilogram(s)	$\mu$	( <i>mu</i> ) micron (0.001 mm.)
km.	kilometre(s)	$\mu$ g.	microgram
$\lambda$	( <i>lambda</i> ) wave length	$\mu$ m	micromicron (0.001 m $\mu$ )
L.	Latin	mV	millivolt(s)
L.	ligament(um)	myc.	mycology
L., Linn.	Linnaean, Linnaeus	N	nitrogen
l.	litre	N	normal solution
l.	laevorotary	N	north
Lam.	Lamarck	n.	nasal
lat.	latitude	n.	nervus
lb.	pound (weight)	n.	neutral, normal
lf.	low frequency	n	haploid number of chromosomes
LH	luteinising hormone	2n	diploid number
Li	lithium	n	refractive index
liq.	liquid ; liquor	n.	noun
L.L.	Late Latin	Na	sodium
log.	logarithm	Ne	neon
long.	longitude	n.g.	new genus
l.p.	low pressure	Ni	nickel
L.S.	longitudinal section	No., no.	number
l.t.	low tension	norm.	normal
L.W.	Low Water	n.p.	normal pressure
M.	Membrana, Musculus	n.sp.	new species
M	( <i>mille</i> ) thousand	NTP	normal temperature and pressure
m.	male	O	oxygen
m.	metre(s)	o-	ortho-
m.	mile(s)	o.	occasional (occurrence of species)
m.	minim(s)	obl.	oblique, oblong
m.	musculus	O.F.	Old French
m-	meta-	O.H.G.	Old High German
ma.	milliampère	$\Omega$	( <i>Omega</i> ) ohm(s)
Mal.	Malaysian	opp.	as opposed to ; opposite
max.	maximum	opt.	optical
mb.	millibar(s)	opt.	optimal
M.E.	Middle English	org.	organic
micr.	microscopic	orig.	original
min.	minimum ; minute(s)	orn., ornith.	ornithology
Mg	magnesium	Os	osmium
mg., mgm.	milligram(s)	O.T.	old terminology
ml.	millilitre(s) ; c.c.	ov.	ovary
MLD	minimum lethal dose	Oz	ozone
mm.	millimetre(s)	oz.	ounce(s)
m $\mu$	millimicron (0.001 $\mu$ )	P	perianth
Mn	manganese	P	phosphorus
Mo	molybdenum	P.	premolar
mo.	month	p	posterior
mol.	gram-molecule	p-	para-
mol. wt.	molecular weight	p.a.	per annum
m.p.	melting point	pal.	palaeontology
m.p.h.	miles per hour	P <sub>1</sub> , P <sub>2</sub> , etc.	1st, 2nd, etc., parental generation
m.p.s.	metres per second		
msec.	millisecond ; $\sigma$		
m.s.l.	mean sea-level		
M.U.	mouse unit		

PATH . . .	pituitary adrenotrophic hormone	ret. . .	retarded
path. . .	pathology	Rh . . .	rhesus factor
Pb . . .	lead	rh . . .	anti Rh agglutinin
Pe . . .	probable error	R.I. . .	refractive index
P $\mu$ E . . .	precipitation: evaporation ratio	Rn . . .	radon
per. . .	perennial	RNA . . .	ribonucleic acid
perp. . .	perpendicular	rot. . .	rotation, rotating
<i>pert.</i> . .	pertaining to	R.Q. . .	respiratory quotient
pH . . .	hydrogen ion concentration	R.U. . .	rat unit
phys. . .	physics	Russ. . .	Russian
physiol. . .	physiology	S . . .	smooth (bacterial colony)
$\pi$ . . .	( <i>pi</i> ) 3.14159265	S . . .	south
pigm. . .	pigment	S . . .	sulphur
Pl. . .	plasma, Plasmodium	s. . .	( <i>sinister</i> ), left
<i>plu.</i> . .	plural	$\Sigma$ . . .	( <i>Sigma</i> ) sum of
P-M-C . . .	pollen mother-cell	$\sigma$ . . .	( <i>sigma</i> ) 0.001 second; msec.
pois. . .	poisonous	$\sigma$ . . .	( <i>sigma</i> ) standard deviation
pop. . .	population	S-A . . .	sino-atrial
pot. . .	potential	Sb . . .	antimony
P-P . . .	pellagra-preventing	S.D.A. . .	specific dynamic action
p.p. . .	post partum	Se . . .	selenium
ppg. . .	precipitating	sec. . .	second, secondary
p.p.m. . .	parts per million	Si . . .	silicon
ppt. . .	precipitate	sin. . .	sinus
p.sol. . .	partly soluble	<i>sing.</i> . .	singular
Pt . . .	platinum	sl. . .	slightly
pt. . .	pint	sm. . .	small
pt. . .	point	S-M-C . . .	sperm or spore mother-cell
P.U. . .	pregnancy urine	Sn . . .	tin
p.u. . .	plant unit(s)	sol. . .	soluble; solution
pulv. . .	( <i>pulvis</i> ) powder	Sp. . .	Spanish
Q <sub>1</sub> . . .	temperature coefficient	sp., spp. . .	species
quad. . .	quadrilateral	sp. gr. . .	specific gravity
ql . . .	quintal	sq. . .	square
qr. . .	quarter	Sr . . .	strontium
qt. . .	quantity	s.s. . .	<i>sensu stricto</i>
qt. . .	quart	sta. . .	stamen(s)
q.v. . .	( <i>quod vide</i> ) which see	sta. . .	station
R. . .	Réaumur	std. . .	standard
R . . .	rough (bacterial colony)	sup. . .	superior
r. . .	Roentgen unit	Sw. . .	Swedish
r . . .	correlation coefficient	sym. . .	symmetrical
r. . .	rare ( <i>appl. species</i> )	<i>syn.</i> . .	synonym
Ra . . .	radium	syst. . .	system
rad. . .	radius	syst. . .	systole
rad. . .	radix	t° . . .	temperature
RE . . .	radium emanation	T <sub>b</sub> , t <sub>b</sub> . . .	body temperature
rect. . .	rectangular	temp. . .	temperature
refl. . .	reflex	tert. . .	tertiary
reg. . .	regular	t.g. . .	type genus
RES . . .	reticulo-endothelial system	Ti . . .	titanium
		Tl . . .	thallium
		tot. . .	total
		trop. . .	tropical



# ABBREVIATIONS

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TSH . . . thyroid-stimulating hormone	vert. . . vertical
TSP . . . thyroid-stimulating hormone of prepituitary	ves. . . vesica, vesicle
U. . . unit(s)	vet. . . veterinary
U . . . uranium	vic. . . vicinal
uns. . . unsymmetrical	visc. . . viscous
U.S.P. . . United States Pharmacopoeia	vol. . . volume
U V. . . ultra-violet	v.s. . . ( <i>vide supra</i> ) see above
V . . . vanadium	vs. . . versus
V. . . vibrio	W . . . tungsten
V. . . vision	W . . . west
v . . . vision	w . . . watt(s)
v. . . volt(s)	wh. . . white
<i>v</i> . . . velocity	wk(s). . . week(s)
<i>v</i> . . . verb	w.l. . . wave length, $\lambda$
var. . . variable, variety	wt. . . weight
ven. . . vena, vein	<i>x</i> . . . haploid generation
Vert. . . Vertebrata	<b>2x</b> . . . diploid generation
vert. . . vertebra, vertebrate	yd(s). . . yard(s)
	yr(s). . . year(s)
	Zn . . . zinc
	zool. . . zoological, zoology



# EQUIVALENTS

- One acre = 4840 square yards = 4046·873 square metres  
 One ångström = 0·0001 micron  
 One are = 119·6033 square yards = 0·02471 acre  
 One atmosphere = 14·7 pounds per square inch = 1033 grams per square centimetre  
 One bar = pressure of mercury column of 29·53 inches, one square centimetre in area, in latitude 45°  
 One British thermal unit = 251·99 calories  
 One centigram = 0·15432 grain  
 One centimetre = 0·39370 inch  
 One chain = 22 yards = 20·116 metres  
 One cubic centimetre = 0·061 cubic inch  
 One cubic foot = 0·0283 cubic metre  
 One cubic inch = 16·387 cubic centimetres  
 One cubic metre = 1·308 cubic yards  
 One degree centigrade = 0·8 degrees Réaumur = 1·8 degrees Fahrenheit  
 One degree Fahrenheit = 0·5556 Centigrade  
 One degree of latitude at the equator = 68·704 statute miles  
 One degree of longitude at the equator = 69·65 statute miles  
 One degree Réaumur = 1·25 degrees Centigrade  
 One drachm = 60 minims  
 One fathom = 6 feet = 1·828767 metres  
 One foot = 12 inches = 30·4801 centimetres  
 One furlong = 10 chains = 201·164 metres  
 One gallon (Imperial) = 1·2 gallons (U.S.A.) = 4·54596 litres  
 One gallon (U.S.A.) = 0·8327 gallon (Imperial) = 3·785 litres  
 One grain (avoirdupois) = 0·0647989 gram  
 One gram = 0·035274 ounce = 15·432356 grains  
 One gram-calorie = 0·003968 British thermal units  
 One hectare = 2·47106 acres  
 One hundredweight = 112 pounds = 50·80 kilograms  
 One inch = 2·53995 centimetres  
 One inch (U.S.A.) = 2·54001 centimetres  
 One kilogram = 2·20462 pounds (avoirdupois)  
 One kilogram per square centimetre = 14·22 pounds per square inch  
 One kilometre = 0·62137 statute mile  
 One litre = 1·76077 pint (Imperial)  
 One metre = 3·28084 feet = 39·37011 inches  
 One microgram = 0·001 milligram = 0·00015 grain  
 One micron = 0·001 millimetre = 0·000039 inch  
 One mil = 0·001 inch  
 One mile (nautical) = 1·152 statute miles = 1·8532 kilometres  
 One mile (statute) = 1·6093 kilometres  
 One millibar = 0·001 bar  
 One milligram = 0·015432 grain  
 One millilitre = 0·001 litre  
 One millimetre = 0·03937 inch

One millimicron	= 0.000001 millimetre
One minim (British)	= 0.05919 cubic centimetre
One minim (U.S.A.)	= 0.00376 cubic inch = 0.06161 cubic centimetre
One ounce (avoirdupois)	= 437.5 grains = 28.34954 grams
One ounce (troy)	= 31.1035 grams
One pennyweight	= 1.555 grams
One pint (Imperial)	= 568.2454 cubic centimetres
One pound (avoirdupois)	= 16 ounces = 453.59243 grams
One pound (Troy)	= 5760 grains = 373.24 grams
One pound per square inch	= 70.308 grams per square centimetre
One quart (Imperial)	= 1.13649 litre
One quart (U.S.A.)	= 0.94636 litre
One quintal	= 100 kilograms = 220.4621 pounds
One rood	= 40 poles = 10.1168 ares
One square centimetre	= 0.15498 square inch
One square foot	= 929.034 square centimetres
One square inch	= 6.4516 square centimetres
One square kilometre	= 0.3861 square mile
One square metre	= 1550 square inches
One square mile	= 640 acres = 2.58998 square kilometres
One square millimetre	= 0.00155 square inch
One square yard	= 0.8361 square metre
One stère	= 35.3156 cubic feet
One stone	= 6.3503 kilograms
One yard	= 0.9144 metre
Sound velocity (air), mean	= 331.7 metres per second
Zero, absolute	= -459.4° F. = -273° C. = -273.15° R.
Zero, centigrade, and Réaumur	= +32° F.
Zero, Fahrenheit	= -17.78° C

# A DICTIONARY OF SCIENTIFIC TERMS

**abactinal** (ăbăk'tinăl, ăbăktî'năl) *a.*

[*L. ab*, from; *Gk. aktis*, ray.]

*Appl.* area of echinoderm body without tube-feet and in which madreporite is usually included; abambulacral; antambulacral.

**abambulacral** (ăb'ămbulă'krăl) *a.*

[*L. ab*, from; *ambulare*, to walk.]

Abactinal, *q.v.*

**abapical** (ăbăp'ikăl) *a.* [*L. ab*, from ;

*apex*, summit.] *Pert.* or situated at lower pole.

**abaxial** (ăbăk'siăl) *a.* [*L. ab*, from ;

*axis*, axle.] *Pert.* that surface of any structure which is remote or turned away from the axis; ex-centric. *Opp.* adaxial.

**abaxile** (ăbăk'sil) *a.* [*L. ab*, from ;

*axis*, axle.] *Appl.* embryo whose axis has not the same direction as axis of seed.

**abbreviated** (ăbrē'viătēd) *a.* [*L. ad*,

to; *brevis*, short.] Shortened; curtailed.

**abdomen** (ăbdō'men) *n.* [*L. abdomen*,

belly.] The belly; in vertebrates, part of body containing digestive organs; in Arthropoda and certain Polychaeta, posterior part of body; in Synascidia, part of zooid below thorax.

**abdominal** (ăbdōm'inăl) *a.* [*L. ab-*

*domen*, belly.] *Pert.* abdomen; *appl.* structures, organs, or parts of organs situated in, on, or closely related to, the abdomen.

**abdominal pores**,—single or paired openings leading from coelom to exterior, in cyclostomes and certain fishes.

**abdominal reflex**,—contraction of abdominal wall muscles when skin over side of abdomen is stimulated.

**abdominal regions**,—nine areas into which the abdomen is divided by

two horizontal and two vertical imaginary lines, viz., hypochondriac (2), lumbar (2), inguinal (2), epigastric, umbilical, hypogastric.

**abdominal ribs**,—ossifications occurring in fibrous tissue between skin and muscles of certain reptiles.

**abdominal ring**,—one of two openings in fasciae of abdominal muscles through which passes spermatic cord in male, round ligament in female; inguinal ring.

**abducens** (ăbdū'sēnz) *n.* [*L. abducere*, to lead away.] The sixth cranial nerve, supplying the rectus externus muscle of the eyeball.

**abduct** (ăbdūkt') *v.* [*L. abductus*, led away.] To draw away from median axis.

**abductor** (ăbdūk'tōr) *n.* [*L. abductus*, led away.] A muscle that draws a limb or part outwards.

**aberrant** (ăbēr'ănt) *a.* [*L. aberrare*, to stray.] With characteristics not in accordance with type; *appl.* species, etc.

**abience** (ăb'iēns) *n.* [*L. abire*, to depart.] Retraction from stimulus; avoiding reaction. *Opp.* adience.

**abient** (ăb'iēnt) *a.* [*L. abire*, to depart.] Avoiding the source of stimulation. *Opp.* adient.

**abiogenesis** (ăbiōjēn'esis) *n.* [*Gk. a*, not; *bios*, life; *genesis*, birth.] The production of living from non-living matter; spontaneous generation. *Opp.* biogenesis.

**abiology** (ăbiōl'ōji) *n.* [*Gk. a*, not; *bios*, life; *logos*, discourse.] The study of non-living things.

**abjunction** (ăbjūngk'shūn) *n.* [*L. abjungere*, to unyoke.] The delimitation of spores by septa at tip of hypha.

**ablactation** (äb'läktä'shün) *n.* [L. *ab*, from; *lactare*, to give milk.] Cessation of milk secretion; weaning.

**abomasum** (äbömä'süm) *n.* [L. *ab*, from; *omasum*, paunch.] The read or fourth chamber of stomach of ruminants.

**aboral** (äbō'räl) *a.* [L. *ab*, from; *os*, *oris*, mouth.] Away from, or opposite to, the mouth.

**abortion** (äbōr'shün) *n.* [L. *abortus*, premature birth.] Premature birth; arrest of development of an organ.

**abbranchiate** (äbräng'kiät) *a.* [Gk. *a*, without; *branchia*, gills.] Without gills.

**abrupt** (äbrüpt') *a.* [L. *abruptere*, to break off.] Appearing as if broken, or cut off, at extremity.

**abruptly - acuminate**, — having a broad extremity from which a point arises, *appl.* leaf.

**abruptly-pinnate**, — having the main axis of epipodium not winged, but bearing a number of secondary axes which are winged.

**abscise** (äbsiz') *v.* [L. *abscidere*, to cut off.] To become separated; to fall off, as leaves, fruit, etc.

**absciss** (äb'sis) *a.* [L. *abscindere*, to cut off.] *Appl.* layer of meristematic cells just outside cork-layer, to whom fall of leaves, floral parts, fruits, and certain branches is due; abscissile.

**abscission** (äbsish'ün) *n.* [L. *abscindere*, to cut off.] The separation of parts.

**absorption** (äbsörp'shün) *n.* [L. *absorbere*, to suck in.] Intussusception of fluid by living cells or tissues; passage of nutritive material through living cells.

**abstriction** (äbstrik'shün) *n.* [L. *abstringere*, to cut off.] The process of detaching spores (conidia) by rounding off of tips of sporophores, as in mildews; abjunction and abscission.

**abterminal** (äbtër'minäl) *a.* [L. *ab*, from; *terminus*, end.] Going from the end inwards.

**abyssal** (äbis'al) *a.* [Gk. *abyssos*, unfathomed.] *Pert.* depths of ocean; *appl.* organisms or material usually found there; abysmal.

**abysso-benthic** (äbis'öbën'thik) *a.* Gk. *abyssos*, unfathomed; *benthos*, depths of sea.] *Pert.*, or found on, bottom of ocean at depths exceeding *ca.* 1000 metres.

**abyssopelagic** (äbis'öpēlāj'ik) *a.* [Gk. *abyssos*, unfathomed; *pelagos*, sea.] *Pert.*, or inhabiting, the ocean at depths exceeding *ca.* 1000 metres, *i.e.*, below the bathypelagic zone.

**acaneaceous** (äkänä'sēüs) *a.* [Gk. *akanos*, thistle.] Prickly; bearing prickles, as leaves.

**acantha** (äkän'thä) *n.* [Gk. *akantha*, thorn.] Prickle; spinous process.

**acanthaceous** (äkänthä'sēüs) *a.* [Gk. *akantha*, thorn.] Bearing thorns or prickles.

**acanthin** (äkän'thīn) *n.* [Gk. *akantha*, thorn.] Substance forming skeleton of some Radiolaria.

**acanthion** (äkän'thion) *n.* [Gk. *akanthion*, small thorn.] The most prominent point on the anterior nasal spine.

**acanthocarpous** (äkän'thökär'püs) *a.* [Gk. *akantha*, thorn; *karpōs*, fruit.] Having fruit covered with spines or prickles.

**acanthocephalous** (äkän'thökēf'älūs, -sēf-) *a.* [Gk. *akantha*, thorn; *kephale*, head.] With hooked proboscis.

**acanthocladous** (äkän'thōkläd'ūs) *a.* [Gk. *akantha*, thorn; *klados*, branch.] Having spiny branches.

**acanthocyst** (äkän'thōsist) *n.* [Gk. *akantha*, thorn; *kystis*, bladder.] A sac containing lateral or reserve stylets in Nemertea.

**acanthoid** (äkän'thoid) *a.* [Gk. *akantha*, thorn; *eidos*, shape.] Resembling a spine or prickle; spiniform.

**acanthophore** (äkän'thōfōr) *n.* [Gk. *akantha*, thorn; *pherein*, to bear.] A conical mass, the basis of median stylet in Nemertea.

**acanthopore** (ākān'thōpōr) *n.* [Gk. *akantha*, thorn; *poros*, passage.]

A tubular spine in certain Polyzoa.

**acanthosphenote** (ākān'thōsfē'nōt) *a.*

[Gk. *akantha*, thorn; *sphen*, wedge.]

*Appl.* echinoid spine made of solid wedges separated by porous tissue.

**acanthozoid** (ākān'thōzō'oid) *n.*

[Gk. *akantha*, thorn; *zoon*, animal; *eidos*, form.] Tail part of prosclolex of cestodes. *Opp.* cystozoid.

**acapnia** (ākāp'niā) *n.* [Gk. *akapnos*,

without smoke.] Condition of low carbon dioxide content in blood

**acaryote**,—akaryote.

**acaulous** (ākōlē's'ēnt) *a.* [Gk. *a*,

without; *kaulos*, stalk.] Having a shortened stem.

**acauline** (ākō'lin) *a.* [Gk. *a*, without;

*kaulos*, stalk.] Having no stem; *appl.* certain fungi.

**accelerator** (āksēl'ērātōr) *n.* [L. *ac-*

*celerare*, to hasten.] *Appl.* muscle or nerve which increases rate of action.

**acceptor** (āksēp'tōr) *n.* [L. *accipere*,

to accept.] Body or substance which receives and unites with another substance, as in oxidation-reduction processes where oxygen acceptor is the substance oxidised, hydrogen acceptor the substance reduced.

**accessorius** (āksēsō'rīūs) *n.* [L. *ac-*

*cedere*, to go to.] A muscle aiding in action of another; spinal accessory or eleventh cranial nerve.

**accessory bodies**,—minute argyrophil

particles originating from Golgi substance in spermatocytes; chromatoid bodies.

**accessory bud**,—an additional axillary bud; a bud formed on a leaf.

**accessory cells**,—see auxiliary cells.

**accessory chromosomes**,—sex chromosomes.

**accessory food factors**,—vitamins.

**accessory glands**,—detached portions of glands; glands in relation with genital ducts.

**accessory pulsatory organs**,—sac-like structures of insects, variously situated, pulsating independently.

**acclimation** (āk'līmā'shūn) *n.* [L. *ad*, to; *clima*, climate.] The

habituation of an organism to a different climate or environment.

**acclimatisation** (āklī'mātfzā'shūn) *n.*

[L. *ad*, to; *clima*, climate.] Habituation of a species to a different climate or environment; acclimation under human management; acclimation.

**accommodation** (āk'ōmōdā'shūn) *n.*

[L. *ad*, to; *commodus*, fitting.] Adjustment of eye to receive clear images of different objects; adaptation of receptors to a different stimulus.

**acrescent** (ākrēs'ēnt) *a.* [L. *accre-*

*scere*, to increase.] *Appl.* plants that continue to grow after flowering, or calyx growing after pollination.

**accretion** (ākrē'shūn) *n.* [L. *accre-*

*scere*, to increase.] Growth by external addition of new matter.

**accumbent** (ākūm'bēnt) *a.* [L. *ac-*

*cumbere*, to lie on.] *Appl.* embryo having cotyledons with edges turned towards radicle, as in Cruciferae.

**accumulators** (ākū'mulātōrz) *n. plu.*

[L. *ad*, to; *cumulus*, heap.] Plants with a relatively high concentration of certain chemical elements in tissues.

**A-cells**,—alpha cells of islets of Langerhans.

**acentric** (āsēn'trik) *a.* [Gk. *a*,

without; *kentron*, centre.] Having no centromere, *appl.* chromosomes and chromosome segments.

**acentrous** (āsēn'trūs) *a.* [L. *a*, with-

out; *centrum*, centre.] With no vertebral centra, but persistent notochord, as certain fishes.

**acephalocyst** (ākēf'ālōsist, -sēf-) *n.*

[Gk. *a*, without; *kephale*, head; *kystis*, bladder.] Hydatid stage of certain tapeworms.

**acephalous** (ākēf'ālūs, -sēf-) *a.* [Gk.

*a*, not; *kephale*, head.] Having no structure comparable to head; *appl.* some molluscs; *appl.* larvae of certain Diptera; *appl.* ovary without terminal stigma.

**acerate** (ās'ērāt) *a.* [L. *acer*, sharp.]

Needle-shaped; pointed at one end, *appl.* monaxon or oxeote spicules.

**acerose** (äs'ērōs) *a.* [L. *acer*, sharp.] Narrow and slender, with sharp point, as leaf of pine.

**acervuline** (äsēr'vūlīn) *a.* [L.L. *dim.* of *acervus*, heap.] Irregularly heaped together, *appl.* foraminiferal tests.

**acervulus** (äsēr'vūlūs) *n.* [L.L. *dim.* of *acervus*, heap.] A small heap or cluster, especially of sporogenous mycelium.

**acervulus cerebri**,—brain sand, *q.v.*  
**acetabular**,—*pert.* acetabulum.

**acetabulum** (äsētāb'ūlūm) *n.* [L. *acetabulum*, vinegar-cup.] The cotyloid cavity or socket in pelvic girdle for head of femur; in insects, cavity of thorax in which leg is inserted; cavity in proximal end of spine, for articulation with mamelon, in echinoids; large posterior sucker in leeches; sucker on arm of cephalopod; one of the cotyledons of placenta in ruminants.

**achaetous** (ākē'tūs) *a.* [Gk. *a*, without; *chaite*, hair.] Without chaetae or bristles.

**acheilary** (āki'lāri) *a.* [Gk. *a*, without; *cheilos*, lip.] Having labellum undeveloped, as some orchids.

**achene** (ākēn') *n.* [Gk. *a*, not; *chainein*, to gape.] A one-seeded, dry, indehiscent fruit; achenium.

**Achillis tendo** (ākil'is tēn'dō) *n.* [Gk. *Achilles*; L. *tendo*, tendon.] The united strong tendon of gastrocnemius and solaeus muscles, tendo calcaneus.

**achlamydeous** (āk'lāmīd'ēūs) *a.* [Gk. *a*, without; *chlamys*, cloak.] Having neither calyx nor corolla.

**achondroplasia** (ākōn'drōplā'zīā) *n.* [Gk. *a*, without; *chondros*, cartilage; *plasis*, a moulding.] Heritable dwarfism due to disturbance of ossification in the long bones of the limbs and of certain facial bones during development; *cf.* ateleosis.

**achroacyte** (āk'rō'āsīt) *n.* [Gk. *a*, not; *chros*, colour; *kytos*, hollow.] Colourless or lymph cell; lymphocyte.

**achroglobin** (āk'rōglō'bīn) *n.* [Gk. *a*, not; *chros*, colour; *globos*,

sphere.] A colourless respiratory pigment of some tunicates and molluscs

**achromasie** (āk'rō'māsī) *n.* [Gk. *a*, not; *chroma*, colour.] Emission of chromatin from nucleus; *cf.* chromasie.

**achromatic** (āk'rōmāt'ik) *a.* [Gk. *a*, without; *chroma*, colour.] *Appl.* threshold, the minimal stimulus inducing sensation of luminosity or brightness; *cf.* chromatic; *appl.* neutral colours; achromatic, *q.v.*

**achromatin** (āk'rō'mātin) *n.* [Gk. *a*, without; *chroma*, colour.] The non-staining ground substance and linin of the nucleus.

**achromatinic** (āk'rō'mātin'ik) *a.* [Gk. *a*, without; *chroma*, colour.] *Pert.* achromatin, or resembling achromatin in properties.

**achromite**,—centromere, *q.v.*

**achroous** (āk'rō'ūs) *a.* [Gk. *a*, without; *chros*, complexion.] Unpigmented; colourless.

**acicle** (ās'ikl) *n.* [L. *acicula*, small needle.] A thorn-shaped scaphocerite, as in Paguridae; acicula, a small spine.

**acicular** (āsik'ulār) *a.* [L. *acicula*, small needle.] Like a needle in shape; sharp-pointed.

**aciculum** (āsik'ulūm) *n.* [L. *acicula*, small needle.] A stiff basal seta in arapodium of Chaetopoda.

**acid-fast**,—remaining stained with aniline dyes on treatment with acids; *appl.* bacteria.

**acidic** (āsīd'ik) *a.* [L. *acidus*, sour.] *Appl.* stains whose colour determinant plays the part of an acid, acting on protoplasm; *cf.* basic.

**acidophil** (ās'idōfil) *a.* [L. *acidus*, sour; Gk. *philein*, to love.] Oxyphil, *q.v.*; growing in acid media.

**aciform** (ās'ifōrm) *a.* [L. *acus*, needle; *forma*, shape.] Needle-shaped.

**acinaciform** (āsīn'āsīfōrm) *a.* [L. *acinaces*, short sword; *forma*, shape.] Shaped like a sabre or scimitar; *appl.* leaf.

**acinarious** (āsīnā'rīūs) *a.* [L. *acinus*, berry.] Having globose vesicles, as some algae.



**aciniform** (äsín'ífórm) *a.* [L. *acinus*, berry; *forma*, shape.] Grape- or berry-shaped; *appl.* a type of silk gland in spiders.

**acinus** (äs'ínüs) *n.* [L. *acinus*, berry.] One of drupels composing fruit of bramble or raspberry; sac-like termination of branched gland.

**acme** (äk'mē) *n.* [Gk. *akme*, prime.] The highest point attained, or prime, in phylogeny and ontogeny; *cf.* epacme, paracme.

**acoelomate** (äsē'lömāt) *a.* [Gk. *a*, without; *koilos*, hollow.] *Appl.* animals not having a true coelom; acoelomatous; acoelous, *q.v.*

**acoelous** (äsē'lūs) *a.* [Gk. *a*, without; *koilos*, hollow.] *Appl.* vertebrae with flattened centra; acoelomate, *q.v.*

**acondylous** (äkön'dilūs) *a.* [Gk. *a*, without; *kondylos*, knuckle.] Without nodes or joints.

**acone** (äkön') *a.* [Gk. *a*, without; *konos*, cone.] *Appl.* insect compound eye without crystalline or liquid secretion in cone cells.

**acontia** (äkön'tiä, äkön'shiä) *n. plu.* [Gk. *akontion*, small javelin.] Threadlike processes of mesenteric filaments armed with stinging cells, in actinians.

**acotyledon** (ä'kötīlē'dön) *n.* [Gk. *a*, without; *kotyledon*, a cup-shaped hollow.] A plant without a cotyledon.

**acoustic** (äkoos'tik) *a.* [Gk. *akouein*, to hear.] *Pert.* organs or sense of hearing; *appl.* meatus, nerve, etc.; *pert.* science of sound.

**acquired character**,—a modification or permanent structural or functional change effected during the lifetime of the individual organism and induced by use or disuse of a particular organ, by disease, trauma, or other functional or environmental influences.

**acraspedote** (äkräs'pēdöt) *a.* [Gk. *a*, without; *kraspedon*, border.] Having no velum.

**acroblast** (äk'röbläst) *n.* [Gk. *akros*, tip; *blastos*, bud.] A body in spermatid and which gives rise to acrosome; outer layer of mesoblast.

**acrobyous** (äkröb'riüs) *a.* [Gk. *akros*, tip; *bryein*, to swell.] Growing at the tip only.

**acrocarpic** (äk'rökär'pik) *a.* [Gk. *akros*, tip; *karpos*, fruit.] Having the fructification terminating the axis; acrocarpous; *appl.* mosses.

**acrocentric** (äk'rösēn'trik) *a.* [Gk. *akros*, tip; *kentron*, centre.] With centromere at end, *appl.* chromosome. *n.* A rod-shaped chromosome.

**acrochordal** (äkrökör'däl) *a.* [Gk. *akros*, tip; *chorde*, cord.] *Appl.* a chondrocranial unpaired frontal cartilage in birds.

**acrocoracoid** (äk'rökör'äkoid) *n.* [Gk. *akros*, tip; *korax*, crow; *eidos*, form.] A process at dorsal end of coracoid in birds.

**acrocyst** (äk'rösist) *n.* [Gk. *akros*, tip; *kystis*, bladder.] The spherical gelatinous cyst formed by gonophores at maturation of generative cells.

**acrodont** (äk'rödönt) *a.* [Gk. *akros*, tip; *odontos*, tooth.] *Appl.* teeth attached to the summit of a parapet of bone, as in lizards.

**acrodrome** (äk'rödröm), **acrodromous** (äk'röd'römūs) *a.* [Gk. *akros*, tip; *dromein*, to run.] *Appl.* leaf with veins converging at its point.

**acrogenous** (äkröj'ēnūs) *a.* [Gk. *akros*, tip; *-genes*, producing.] Increasing in growth at summit or apex.

**acrogynous** (äkröj'inūs) *a.* [Gk. *akros*, tip; *gyne*, female.] With archegonia arising from apical cell, *appl.* certain liverworts. *Opp.* anacrogynous.

**acromegaly** (äk'römēg'älī) *n.* [Gk. *akros*, tip; *megalos*, great.] Gigantism due to excessive activity of part of pituitary gland.

**acromial** (äkrö'miäl) *a.* [Gk. *akros*, summit; *omos*, shoulder.] *Pert.* acromion, *appl.* artery, process, ligament, etc.

**acromio-clavicular** (äkrö'miöklävik'-ülär) *a.* [Gk. *akromion*, shoulder-summit; L. *clavicus*, *dim.* of *clavis*, key.] *Appl.* ligaments covering joint between acromion and clavicle.

**acromion** (āk'rō'miōn) *n.* [Gk. *akros*, summit; *omos*, shoulder.] Ventral prolongation of scapular spine.

**acron** (āk'rōn) *n.* [Gk. *akros*, tip.] Preoral region of insects; anterior, unsegmented part of young trilobite.

**acropetal** (āk'rōp'ētāl) *a.* [Gk. *akros*, summit; L. *petere*, to seek.] Ascending; *appl.* leaves, flowers, or roots, developing successively from an axis so that youngest arise at apex.

**acrophyte** (āk'rōfit) *n.* [Gk. *akron*, peak; *phyton*, plant.] A plant growing at a high altitude; alpine plant.

**acropodium** (āk'rōpōdiūm) *n.* [Gk. *akros*, tip; *podus*, foot.] Digits,—fingers or toes; *cf.* metapodium.

**acrorhagus** (āk'rōrā'gūs) *n.* [Gk. *akros*, summit; *rhax*, grape.] A tubercle near the margin of certain Actiniaria, containing specialised nematocysts.

**acrosarc** (āk'rōsārċ) *n.* [Gk. *akros*, summit; *sarx*, flesh.] A pulpy berry resulting from union of ovary and calyx.

**acroscopic** (āk'rōskōp'ik) *a.* [Gk. *akros*, tip; *skopein*, to view.] Facing towards the apex, *opp.* basiscopic.

**acrosome** (āk'rōsōm) *n.* [Gk. *akros*, tip; *soma*, body.] Body at apex of spermatozoon; apical body; perforatorium.

**acrospire** (āk'rōspīr) *n.* [Gk. *akros*, tip; *speira*, something twisted.] The first shoot or sprout, being spiral, at end of germinating seed.

**acrospore** (āk'rōspōr) *n.* [Gk. *akros*, tip; *sporos*, seed.] The spore at end of a sporophore.

**acroteric** (āk'rōtēr'ik) *a.* [Gk. *akroterion*, topmost point.] *Pert.* outermost points, as tips of digits, nose, ears, tail.

**acrotonic** (āk'rōtōn'ik) *a.* [Gk. *akros*, tip; *tonos*, brace.] Having anther united at its apex with rostellum; acrotonous. *Opp.* basitonic.

**acrotrophic** (āk'rōtrōf'ik) *a.* [Gk. *akros*, tip; *trophē*, nourishment.] *Appl.* ovariole having nutritive cells at apex which are joined to

oocytes by nutritive cords; telotrophic.

**actinal** (āk'tīnāl, āktī'nāl) *a.* [Gk. *aktis*, ray.] *Appl.* area of echinoderm body with tube-feet; *appl.* oral area with tentacles in Actiniaria.

**actine** (āk'tīn) *n.* [Gk. *aktis*, ray.] A star-shaped spicule.

**actinenchyma** (āk'tīnēng'kīmā) *n.* [Gk. *aktis*, ray; *en*, in; *chein*, to pour.] Cellular tissue having a stellate appearance.

**actiniform**,—actinoid.

**actinobiology** (āk'tinōbīōl'ōjī) *n.* [Gk. *aktis*, ray; *bios*, life; *logos*, discourse.] The study of the effects of radiation upon living organisms.

**actinoblast** (āk'tinōblāst) *n.* [Gk. *aktis*, ray; *blastos*, bud.] The mother-cell from which a spicule is developed, as in Porifera.

**actinocarpous** (āk'tinōkār'pūs) *a.* [Gk. *aktis*, ray; *karpōs*, fruit.] *Appl.* plants with flowers and fruit radially arranged; actinocarpic.

**actinodrome** (āktin'ōdrōm) *a.* [Gk. *aktis*, ray; *dromos*, course.] Veined palmately; actinodromous.

**actinogonidial** (āk'tinōgōnīd'īāl) *a.* [Gk. *aktis*, ray; *gonos*, offspring.] Having radiately arranged genital organs.

**actinoid** (āk'tinoid) *a.* [Gk. *aktis*, ray; *eidōs*, shape.] Rayed; star-shaped, stellate.

**actinomere** (āktin'ōmēr) *n.* [Gk. *aktis*, ray; *meros*, part.] A radial segment.

**actinomorph** (āk'tinōmōr'fik) *a.* [Gk. *aktis*, ray; *morphe*, shape.] Radially symmetrical; actinomorphous.

**actinopharynx** (āk'tinōfār'ingks) *n.* [Gk. *aktis*, ray; *pharynx*, gullet.] The gullet of a sea-anemone.

**actinost** (āk'tinōst) *n.* [Gk. *aktis*, ray; *osteon*, bone.] Basal bone of fin-rays in teleosts.

**actinostele** (āk'tinōstē'lē) *n.* [Gk. *aktis*, ray; *stēle*, pillar.] Stele with xylem radiating outwards and forming ridges, as in certain Pteridophyta.

**actinostome** (äktin'östöm) *n.* [Gk. *aktis*, ray; *stoma*, mouth.] The mouth of a sea-anemone; five-rayed oral aperture of starfish.

**actinotrichia** (äk'tinötirik'ia) *n. plu.* [Gk. *aktis*, ray; *thrix*, hair.] Unjointed horny rays at edge of fins in many fishes.

**actinotrocha** (äk'tinöt'rökä) *n.* [Gk. *aktis*, ray; *trochos*, wheel.] Free-swimming larval form of Phoronis.

**actinula** (äktin'ulä) *n.* [Gk. *aktis*, ray.] A larval stage in some Hydro-medusae.

**action system**,—behaviour pattern.

**activator** (äktivä'tör) *n.* [L. *activus*, active.] A substance which promotes or protects enzyme action; a substance which stimulates development of any particular embryonic tissue or organ.

**aculeate** (äkū'lēāt) *a.* [L. *aculeus*, prickle.] Having prickles, sharp points, or a sting.

**aculeiform** (äkū'lēiförm) *a.* [L. *aculeus*, prickle; *forma*, shape.] Formed like a prickle or thorn.

**aculeus** (äkū'lēūs) *n.* [L. *aculeus*, prickle.] A prickle growing from bark, as in rose; a sting; a hair-like projection; a microtrichium.

**acuminate** (äkū'mināt) *a.* [L. *acumen*, point.] Drawn out into long point; tapering; pointed.

**acuminiferous** (äkū'minif'erūs) *a.* [L. *acumen*, point; *ferre*, to carry.] Having pointed tubercles.

**acuminulate** (äk'ūmin'ulāt) *a.* [L. *acuminulus*, *dim.* of *acumen*, point.] Having a very sharp tapering point.

**acute** (äküt) *a.* [L. *acutus*, sharpened.] Ending in a sharp point; temporarily severe, not chronic.

**acyclic** (äskl'ik) *a.* [Gk. *a*, without; *kyklos*, circle.] *Appl.* flowers with floral leaves arranged in a spiral.

**adamantoblast** (äd'amän'töbläst) *n.* [Gk. *adamas*, diamond; *blastos*, bud.] Enamel cell; ameloblast.

**adambulacral** (äd'ämbulä'kräl) *a.* [L. *ad*, to; *ambulare*, to walk.] *Appl.* structures adjacent to ambulacral areas in echinoderms.

**adaptation** (ädäptä'shün) *n.* [L. *ad*, to; *aptare*, to fit.] The process by which an organism becomes fitted to its environment; a structure or habit fitted for some special environment; the fitting of sensations to a point when discomfort ceases; adjustment of disturbance of nervous system without involving higher co-ordinating centres.

**adaxial** (ädäk'siäl) *a.* [L. *ad*, to; *axis*, axle.] Turned towards the axis. *Opp.* abaxial.

**ad-digital** (äd'dij'itäl) *n.* [L. *ad*, to; *digitus*, finger.] A primary wing-quill connected with phalanx of third digit.

**adduction** (äd'dük'shün) *n.* [L. *ad*, to; *ducere*, to lead.] Movement towards the median axis.

**adductor** (äd'dük'tör) *n.* [L. *ad*, to; *ducere*, to lead.] A muscle which brings one part towards another.

**adeciduate** (äd'dēsüd'üät) *a.* [L. *a*, away from; *decidere*, to fall down.] Not falling, or coming away; *appl.* evergreens; *appl.* placenta.

**adelocodonic** (ädē'löködön'ik) *a.* [Gk. *adelos*, concealed; *kodon*, bell.] *Appl.* undetached medusome of certain Gymnoblastera, which degenerates after discharging ripe sexual cells. *Opp.* phanerocodonic.

**adelomorphic** (ädē'lömôr'fik) *a.* [Gk. *adelos*, concealed; *morphe*, shape.] Indefinite in form; *appl.* central cells of peptic glands; adelomorphous.

**adelophycean** (ädē'löfisē'an) *a.* [Gk. *adelos*, concealed; *phykion*, seaweed.] *Appl.* stage or generation of many seaweeds when they appear as prostrate microthalli.

**adelphogamy** (ädēlfög'ämi) *n.* [Gk. *adelphos*, brother; *gamos*, marriage.] Brother-sister mating, as in certain ants.

**adelphous** (ädēl'fūs) *a.* [Gk. *adelphos*, brother.] Joined together in bundles, as filaments of stamens; cf. monadelphous, diadelphous.

**adendritic** (äd'dēndrit'ik) *a.* [Gk. *a*, not; *dendron*, tree.] Adendric; without dendrites or branches; *appl.* cells.

**adendroglia** (ädëndrôgli'ä) *n.* [Gk. *a*, not; *dendron*, tree; *glôia*, glue.]

A type of neuroglia lacking processes.

**adenine** (äd'ënin) *n.* [Gk. *aden*, gland.] A compound occurring in many cells, hydrolysed by adenase to hypoxanthine;  $C_5H_5N_5$ .

**adenoblast** (äd'ënöbläst) *n.* [Gk. *aden*, gland; *blastos*, bud.] Embryonic glandular cell.

**adenocheiri** (äd'ënökí'ri) *n. plu.* [Gk. *aden*, gland; *cheir*, hand.] Elaborate accessory copulatory organs, outgrowths of atrial walls in Turbellaria.

**adenocyte** (äd'ënösit) *n.* [Gk. *aden*, gland; *kytos*, hollow.] Secretory cell of a gland.

**adenodactyli** (äd'ënödák'tíli) *n. plu.* [Gk. *aden*, gland; *daktylos*, finger.] Adenocheiri, *q.v.*

**adenohypophysis** (äd'ënöhîpôf'ísís) *n.* [Gk. *aden*, gland; *hypo*, under; *physis*, growth.] The glandular lobe or portions of the pituitary body, derived from Rathke's pouch.

**adenoid** (äd'ënoid) *a.* [Gk. *aden*, gland; *eidos*, shape.] *Pert.* or resembling a gland or lymphoid tissue.

**adenophore** (äd'ënöfô'r) *n.* [Gk. *aden*, gland; *pherein*, to carry.] The stalk of a nectar gland.

**adenophyllous** (äd'ënöfil'ús) *a.* [Gk. *aden*, gland; *phyllon*, leaf.] Bearing glands on leaves.

**adenopodous** (äd'ënöp'ödüs) *a.* [Gk. *aden*, gland; *pous*, foot.] Bearing glands on peduncles or petioles.

**adenose** (äd'ënös) *a.* [Gk. *aden*, gland.] Glandular.

**adenostemonous** (äd'ënöstëm'onüs) *a.* [Gk. *aden*, gland; *stemon*, spun thread.] Having glands on stamens.

**adequate**,—*appl.* stimulus which normally acts on a given receptor, and induces the appropriate sensation.

**adermin**,—vitamin  $B_6$ , rat anti-dermatitis factor; pyridoxine.

**adesmic** (ädës'mík) *a.* [Gk. *adesmos*, unfettered.] *Appl.* cyclomerial scales made up of separate lepidomerial units; *cf.* monodesmic, polydesmic.

**adesmy** (ädës'mî) *n.* [Gk. *adesmos*, unfettered.] A break or division in an organ usually entire.

**adetopneustic** (äd'ëtônü'stik) *a.* [Gk. *adetos*, free; *pnein*, to breathe.] Having dermal gills occurring beyond abactinal surface, as in certain stelleroids.

**adfrontal** (ädfrün'täl) *a.* [L. *ad*, to; *frons*, forehead.] *Appl.* oblique plates beside frons of certain insect larvae.

**adherent** (ädhë'rënt) *a.* [L. *ad*, to; *haerere*, to stick.] Exhibiting adhesion, *q.v.*; attached to substratum, *appl.* zoecia of polyzoan colony.

**adhesion** (ädhë'zhün) *n.* [L. *ad*, to; *haerere*, to stick.] Condition of touching without growing together of parts normally separate, as between members of different series of floral leaves; *cf.* cohesion.

**adhesive cells**,—various glandular or specialised cells for purposes of attachment; as on tentacles of Ctenophora, on epidermis of Turbellaria, on pedal disc of Hydra.

**adience** (äd'iëns) *n.* [L. *adire*, to approach.] Urge, or advance, towards stimulus; approaching reaction. *Opp.* abience.

**adient** (äd'iënt) *a.* [L. *adire*, to approach.] Approaching the source of stimulation. *Opp.* abient.

**adipocellulose** (äd'îpôsël'ülös) *n.* [L. *adeps*, fat; *cellula*, small cell.] Cellulose with a large amount of suberin, as in cork tissue.

**adipocyte** (äd'îpösit) *n.* [L. *adeps*, fat; Gk. *kytos*, hollow.] One of the cells forming the fat-body in insects.

**adipoleucocyte** (äd'îpölü'kösit, -loo-) *n.* [L. *adeps*, fat; Gk. *leukos*, white; *kytos*, hollow.] A leucocyte containing fat droplets or wax, in insects.

**adipose** (äd'îpös) *a.* [L. *adeps*, fat.] *Pert.* animal fat; fatty.

**A-disc**,—doubly refracting or anisotropic band in myofibrillae.

**aditus** (äd'itūs) *n.* [L. *aditus*, entrance.] Anatomical structure forming approach or entrance to a part, *e.g.* to antrum, larynx, etc.

**adjustor** (ädjüs'tör) *n.* [L.L. *adjustare*, to adjust, from L. *ad*, to; *justus*, just.] A muscle connecting stalk and valve in Brachiopoda; ganglionic part of a reflex arc, connecting receptor and effector.

**adlacrimal** (ädläk'rimal) *n.* [L. *ad*, to; *lacrima*, tear.] Lacrimal bone of reptiles.

**adminiculum** (äd'minik'ülüm) *n.* [L. *adminiculum*, support.] A locomotory spine of certain pupae; posterior fibres of linea alba attached to os pubis.

**adnasal** (ädnä'säl) *n.* [L. *ad*, to; *nasus*, nose.] A small bone in front of each nasal in certain fishes.

**adnate** (ädnä't) *a.* [L. *ad*, to; *gnatus*, born.] *Pert.* or designating the condition of being closely attached to side of petiole or stalk, as stipules or leaves; designating condition of anther with back attached throughout its length to filament, or to its continuation the connective; conjoined.

**adnexa** (ädnek'sä) *n. plu.* [L. *ad*, to; *nectere*, to bind.] Structures or parts closely related to an organ; extra-embryonic structures, as foetal membranes, placenta.

**adnexed** (ädnekst') *a.* [L. *ad*, to; *nectere*, to bind.] Reaching to the stem only.

**adolescaria** (ädölëskä'riä) *n.* [L. *adolescere*, to grow up.] Encysted stage, between cercaria and marita, in trematodes; metacercaria.

**adoral** (ädör'äl) *a.* [L. *ad*, to; *os*, mouth.] Near or *pert.* mouth.

**adpressed** (äd'prëst) *a.* [L. *ad*, to; *pressus*, pressed.] Closely applied to a surface.

**adradius** (äd rä'diūs) *n.* [L. *ad*, to; *radius*, radius.] In coelenterates, the radius midway between per-radius and interradius, a radius of third order.

**adrectal** (ädrek'täl) *a.* [L. *ad*, to;

*rectum*, rectum.] Near to or closely connected with rectum.

**adrenal** (äd rë'näl) *a.* [L. *ad*, to; *renes*, kidneys.] Situated near kidneys; suprarenal, *appl.* glands, the endocrines secreting hormones affecting sympathetic nervous system and blood pressure; *appl.* organs, the suprarenal and interrenal glands, and chromaphil bodies.

**adrenaline** (äd rë'näl in, äd rë'näl en) *n.* [L. *ad*, to; *renes*, kidneys.] A hormone obtained from extract of suprarenal medulla; adrenalin, adrenin, suparenin, epinephrin;  $C_9H_{13}O_3N$ .

**adrenergic** (äd rë'nër'jik) *a.* [L. *ad*, to; *renes*, kidneys; Gk. *ergon*, work.] *Appl.* sympathetic nerves, which liberate sympathin or an adrenaline-like principle from their terminations; adrenergic; *cf.* cholinergic.

**adrenocortical** (äd rë'nökôr'tikäl) *a.* [L. *ad*, to; *renes*, kidneys; *cortex*, bark.] *Pert.*, or secreted in, the adrenal cortex.

**adrenocorticotrophic** (äd rë'nökôr'tikötröf'ik) *a.* [L. *ad*, to; *renes*, kidneys; *cortex*, bark; Gk. *trophë*, nourishment.] *Appl.* hormone secreted by anterior lobe of pituitary gland and which controls activity of adrenal cortex; ACTH.

**adrenotropic** (äd rë'nötröp'ik) *a.* [L. *ad*, to; *renes*, kidneys; Gk. *trophë*, turn.] Adrenotrophic; *appl.* a pituitary hormone acting on the adrenal medulla.

**adrostral** (äd rös'träl) *a.* [L. *ad*, to; *rostrum*, beak.] Near to or closely connected with beak or rostrum.

**adsorption** (ädsörp'shün) *n.* [L. *ad*, to; *sorbere*, to suck in.] The adhesion of molecules to solid bodies; formation of unimolecular surface layer.

**adtidal** (äd'tidäl) *a.* [L. *ad*, to; A.S. *tid*, time.] *Appl.* organisms living just below low-tide mark.

**adultoid**,—*appl.* nymph having imaginal characters differentiated further than in normal nymph.

**aduncate** (ädüŋg'kāt) *a.* [L. *aduncus*, hooked.] Crooked; bent in the form of a hook.

**advehent** (ad'vēhēnt) *a.* [L. *advehere*, to carry to.] Afferent; carrying to an organ.

**adventitia** (ädvēntīsh'īā) *n.* [L. *adventitiū*, extraordinary.] External connective tissue layer of blood vessels; tunica adventitia.

**adventitious** (ädvēntīsh'ūs) *a.* [L. *adventitiū*, extraordinary.] Accidental; found in an unusual place; *appl.* tissues and organs arising in abnormal positions; secondary, *appl.* dentine.

**aecial**,—aecidial.

**aecidia**,—*plu.* of aecidium.

**aecidial** (ēsīd'īāl) *a.* [L. *aecidium*, cup.] *Pert.* aecidia, or aecidium; *appl.* primordium.

**aecidiosorus** (ēsīd'īōsōr'ūs) *n.* [L. *aecidium*, cup; Gk. *soros*, heap.] A cluster or row of aecidiospores.

**aecidiospores** (ēsīd'īōspōrz') *n. plu.* [L. *aecidium*, cup; Gk. *sporos*, seed.] The spores produced in an aecidium; spring-spores.

**aecidium** (ēsīd'īūm) *n.* [L. *aecidium*, cup.] A cup-shaped structure containing simple sporophores, bearing rows of spores; cluster-cup of rusts.

**aeciospores**,—aecidiospores, *q.v.*

**aecium**,—aecidium, *q.v.*

**aedeagus** (ēdē'āgūs) *n.* [Gk. *aidōia*, genitals.] The male intromittent organ of insects; also aedoeagus.

**aegithognathous** (ē'jīthōg'nāthūs) *a.* [Gk. *aegithos*, hedge-sparrow; *gnathos*, jaw.] With maxillo-palatines separate, vomers forming a wedge in front and diverging behind; *appl.* a type of palate found in Passeres.

**aeolian** (ēōl'īān) *a.* [L. *Aeolus*, god of the winds.] Wind-borne; *appl.* deposits.

**aerenchyma** (āērēŋg'klmā) *n.* [Gk. *aer*, air; *engchyma*, infusion.] Tissue between spore mass and capsule wall in mosses; cortex of submerged roots of certain swamp plants; aerating cortical tissue in floating portions of some aquatic plants.

**aerial** (āēr'īāl) *a.* [L. *aer*, air.] In-

habiting the air; *appl.* roots growing above ground, *e.g.* from stems of ivy, for purposes of climbing; also to small bulbs appearing in leaf-axils.

**aerobe** (ā'ērōb) *n.* [Gk. *aer*, air; *bios*, life.] An aerobic organism, capable of living in presence of oxygen. *Opp.* anaerobe.

**aerobic** (ā'ērōb'īk) *a.* [Gk. *aer*, air; *bios*, life.] Thriving only in presence of oxygen.

**aerobiology** (ā'ērōbīōl'ōjī) *n.* [Gk. *aer*, air; *bios*, life; *logos*, discourse.] The study of airborne organisms and their distribution; biology of aeroplankton.

**aerobiosis** (ā'ērōbīō'sīs) *n.* [Gk. *aer*, air; *biosis*, manner of life.] Existence in presence of oxygen.

**aerocyst** (ā'ērōsīst) *n.* [Gk. *aer*, air; *kystis*, bladder.] An air vesicle of algae.

**aerogenic** (ā'ērōjēn'īk) *a.* [Gk. *aer*, air; *gennaein*, to produce.] Gas-producing; *appl.* certain bacteria.

**aeromorphosis** (ā'ērōmōr'fōsis, -mōrfō'sīs) *n.* [Gk. *aer*, air; *morphosis*, form.] Modification of form or structure owing to exposure to air or wind.

**aerophyte** (ā'ērōfīt) *n.* [Gk. *aer*, air; *phylon*, plant.] A plant growing attached to an aerial portion of another plant; epiphyte.

**aeroplankton** (ā'ērōplāŋgk'tōn) *n.* [Gk. *aer*, air; *plāngktos*, wandering.] Living particles drifting in the air, as spores, pollen, bacteria, etc.; also applied to non-living particles.

**aerostat** (ā'ērōstāt) *n.* [L. *aer*, air; *stare*, to stand.] An air-sac in insect body or in bird bone.

**aerostatic** (ā'ērōstāt'īk), *a.* [L. *aer*, air; *stare*, to stand.] Pneumatic; containing air-spaces.

**aerotaxis** (ā'ērōtāk'sīs) *n.* [Gk. *aer*, air; *taxis*, arrangement.] The arrangement of bacteria and other micro-organisms towards or away from oxygen.

**aerotropic** (ā'ērōtrōp'īk) *a.* [Gk. *aer*, air; *trope*, turn.] *Appl.* curvature of a plant organ towards a higher concentration of oxygen.

**aerotropism** (äērōt'ropīzm) *n.* [Gk. *aer*, air; *trope*, turn.] Reaction to gases, generally to oxygen.

**aesthacyte** (ēs'thāsīt) *n.* [Gk. *aisthesis*, sensation; *kytos*, hollow.] A sensory cell of primitive animals.

**aesthesia** (ēsthē'sīs) *n.* [Gk. *aisthesis*, sensation.] Sensibility; sense-percept; aesthesia.

**aesthetasc** (ēsthē'tāsk) *n.* [Gk. *aisthetes*, perceiver; *askein*, to exercise.] An olfactory receptor on antennule of daphnids.

**aesthetes** (ēsthē'tēz) *n. plu.* [Gk. *aisthetes*, perceiver.] Sense organs.

**aestival** (ēstī'vāl, ēs'tivāl) *a.* [L. *aestivus*, of summer.] Produced in, or *pert.* summer.

**aestivation** (ēs'tivā'shūn) *n.* [L. *aestivus*, of summer.] The mode in which different parts of flower are disposed in flower-bud; prefloration; torpor during summer, as in some animals; dormancy during heat and drought period, *opp.* hibernation.

**aethalium** (ēthā'liūm) *n.* [Gk. *aithalos*, soot.] An aggregation of plasmodia or sporangia to form a compound fruit in Mycetoza or Myxomycetes.

**aetiology** (ētīōl'ōjī) *n.* [Gk. *aitia*, cause; *logos*, discourse.] The science of causation; or origin of causes; also etiology.

**afferent** (āf'ērēnt) *a.* [L. *afferre*, to bring.] Bringing towards; *appl.* nerves carrying impulses to nervous centres; *appl.* blood-vessels carrying blood to an organ or set of organs.

**aflagellar** (ā'flājēl'ār) *a.* [Gk. *a*, without; L. *flagellum*, whip.] Without a flagellum.

**afterbirth** (āf'tərbērth) *n.* [A.S. *aefter*, behind; *beran*, to bring forth.] Placenta and foetal membranes expelled after offspring.

**afterbrain**,—myelencephalon, *q.v.*

**aftershaft** (āf'tērshāft) *n.* [A.S. *aefter*, behind; O.E. *scaeft*, shaft.] A small tuft of down near superior umbilicus of a feather.

**agameon** (āgāmē'ōn) *n.* [Gk. *a*,

without; *gamos*, marriage; *on*, being.] A species comprising only apomictic individuals.

**agamete** (āg'āmēt) *n.* [Gk. *a*, without; *gametes*, spouse.] An amoebula, or germ cell, which develops directly without syngamy into an adult.

**agametoblast** (āgāmē'tōblāst) *n.* [Gk. *a*, not; *gametes*, spouse; *blastos*, bud.] A cytome, *q.v.*, of Caryotropha.

**agamic** (āgām'ik) *a.* [Gk. *a*, without; *gamos*, marriage.] Asexual; parthenogenetic; cryptogamic; agamous.

**agamobium** (āg'āmōb'iūm) *n.* [Gk. *a*, without; *gamos*, marriage; *bios*, life.] The asexual stage in metagenesis; the sporophyte.

**agamogenesis** (āg'āmōjēn'ēsīs) *n.* [Gk. *a*, without; *gamos*, marriage; *genesis*, descent.] Asexual reproduction; parthenogenesis.

**agamogenetic** (āg'āmōjēnēt'ik) *a.* [Gk. *a*, without; *gamos*, marriage; *genesis*, descent.] Asexual; produced asexually.

**agamogony** (āg'āmōg'ōnī) *n.* [Gk. *a*, without; *gamos*, marriage; *gonos*, generation.] Schizogony, or reproduction without sexual process.

**agamont** (āg'āmōnt) *n.* [Gk. *a*, without; *gamos*, marriage; *on*, being.] A schizont, or that stage which gives rise to agametes.

**agamospecies** (āg'āmōspē'shēz) *n.* [Gk. *a*, without; *gamos*, marriage; L. *species*, particular kind.] Species without sexual reproduction, as in parthenogenetic aneuploids.

**agamous**,—agamic, *q.v.*

**agar** (āg'ār, ā'gār) *n.* [Mal. *agar-agar*, a sea-weed.] A medium for bacterial and other cultures, prepared from agar-agar, a gelatinous substance, also of dietary utility, yielded by red algae.

**age and area**,—hypothesis of Willis that older species occur in a more extensive area than that occupied by more recent species.

**ageotropic**,—apogeotropic, *q.v.*

- agglomerate** (äglöm'ērāt) *a.* [L. *ad*, to; *glomus*, ball.] Clustered, as a head of flowers; *appl.* adhering mass of protozoa, as in agglomeration of trypanosomes.
- agglutination** (ägl'ootinā'shūn) *n.* [L. *ad*, to; *glutinare*, to glue.] The formation of clumps or floccules by pollen, bacteria, erythrocytes, spermatozoa, and some protozoa.
- agglutinin** (ägl'ootin'in) *n.* [L. *ad*, to; *glutinare*, to glue.] A substance or specific antibody which causes agglutination.
- agglutininogen** (ägl'ootin'ōjēn) *n.* [L. *ad*, to; *glutinare*, to glue; Gk. *gennaen*, to produce.] Substance or antigen that produces agglutinin.
- aggregate** (ägr'ēgāt) *a.* [L. *ad*, to; *gregare*, to collect into a flock.] Formed in a cluster; *appl.* a fruit or etaerio formed from apocarpous gynoecium of a single flower, as raspberry; *appl.* certain medullary rays; *appl.* a type of silk gland in certain spiders.
- aggregation** (ägr'ēgā'shūn) *n.* [L. *ad*, to; *gregare*, to collect.] A grouping or crowding of separate organisms; movement of protoplasm in tentacle or tendril cells of sensitive plants, which causes tentacle or tendril to bend towards the point stimulated.
- aggressin** (ägrēs'in) *n.* [L. *aggressus*, attacked.] Toxic substance produced by pathogenic organisms, inhibiting defensive reactions of host.
- aglomerular** (äglömēr'ülār) *a.* [Gk. *a*, without; L. *glomerare*, to form into a ball.] Devoid of glomeruli, as kidney in certain fishes.
- aglossate** (äglös'āt) *n.* [Gk. *a*, without; *glossa*, tongue.] Having no tongue.
- agminated** (ägm'inātēd) *a.* [L. *agmen*, herd.] Clustered; *appl.* glands, Peyer's patches.
- agnathostomatous** (ägnāth'östöm'-ātūs) *a.* [Gk. *a*, without; *gnathos*, jaw; *stoma*, mouth.] Having mouth unfurnished with jaws, as lamprey; agnathous.
- agon** (ägr'ōn) *n.* [Gk. *agon*, contest.] The active principle of an enzyme; *cf.* pheron, symplex.
- agonist** (ägr'ōnist) *n.* [Gk. *agonistes*, champion.] A prime mover or muscle directly responsible for change in position of a part.
- agranulocyte** (ägrän'ülōsit) *n.* [Gk. *a*, without; L. *granulum*, small grain; Gk. *kytos*, hollow.] A non-granular or lymphoid leucocyte.
- agrestal** (ägrēs'tāl) *a.* [L. *agrestis*, rural.] *Appl.* plants growing on arable land.
- agriotype** (ägr'riōtip) *n.* [Gk. *agrios*, wild; *typos*, image.] Wild or ancestral type.
- agrostology** (ägr'rōstöl'ōji) *n.* [Gk. *agrostis*, grass; *logos*, discourse.] That part of botany dealing with grasses.
- aheliotropism**,—apheliotropism, *q.v.*
- A-horizon**,—the upper, or leached, soil layers.
- air-bladder** (är'-blād'er) *n.* [L. *aer*, air; A.S. *blædre*, bladder.] The swim-bladder in fishes; hollow dilatation of thallus in bladder-wrack.
- air-cells**,—thin-walled cavities in ethmoidal labyrinth; numerous cavities in mastoid; alveoli of lungs; air spaces in plant tissue.
- air-pore**,—stoma, *q.v.*, of plants.
- air-sacs**,—spaces filled with air and connected with lungs in birds; dilatations of tracheae in many insects; sacs representing tracheal system and having hydrostatic function in certain insect larvae.
- air sinuses**,—cavities in frontal ethmoid, sphenoid and maxillary bones, with passages to nasal cavities.
- aitionastic** (i'tiōnās'tik) *a.* [Gk. *aitios*, causing; *nastos*, closepressed.] *Appl.* curvature of part of a plant and induced by a diffuse stimulus.
- akanth**,—see *acanth*.
- akaryocyte**,—akaryote; an erythrocyte.



**akaryote** (ākār'īōt) *n.* [Gk. *a*, without; *karyon*, nut.] A cell in which nucleoplasm has not collected together to form a nucleus; a non-nucleated cell, condition present in many protista. *a.* Non-nucleated.

**akene**,—achene.

**akinesis** (ākīnē'sis) *n.* [Gk. *a*, not; *kinesis*, movement.] Absence or arrest of motion.

**akinete** (āk'inēt) *n.* [Gk. *a*, not; *kinein*, to move.] A resting cell in certain green algae, which will later reproduce.

**ala** (ā'lā, ālā) *n.* [L. *ala*, wing.] Any winglike projection or structure; lateral petal of papilionaceous flower; membranous expansion on some seeds. *Plu.* alae.

**alar** (ā'lār) *a.* [L. *ala*, wing.] Winglike; *pert.* wings or alae; axillary; *appl.* ligaments, cartilages, etc.

**alary** (ā'lārī) *a.* [L. *ala*, wing.] Winglike; *pert.* wings.

**alate** (āl'āt) *a.* [L. *alatus*, winged.] Having a wing-like expansion, as of petiole or stem; broad-lipped, *appl.* shells; *appl.* a spicular system in Calcareia which is sagittal because of inequality of angles; winged.

**albedo** (ālbē'dō) *n.* [L. *albus*, white.] Diffused reflection, the ratio of the amount of light reflected by a surface to the amount of incident light; mesocarp of hesperidium, *cf.* flavedo.

**albescent** (ālbēs'ent) *a.* [L. *albescere*, to grow white.] Growing whitish.

**albicant** (āl'bikānt) *a.* [L. *albicare*, to grow white.] Tending to become white.

**albinism** (āl'binizm) *n.* [L. *albus*, white.] Absence of pigmentation in animals normally pigmented; state of having colourless chromatophores.

**albino** (ālbē'nō, ālbī'nō) *n.* [Sp. *albino*, white, from L. *albus*.] Any animal with congenital deficiency of pigment in skin, hair, eyes, etc.; a plant with colourless chromatophores, due to absence of chloroplasts or undeveloped chromoplasts.

**albuginea** (ālbūjīn'ēā) *n.* [L. *albus*, white; *gignere*, to beget.] Tunica albuginea: white, dense connective tissue surrounding testis, ovary, corpora cavernosa, spleen, or eye.

**albumen** (ālbū'mēn) *n.* [L. *albumen*, white of egg.] White of egg; nutritive material stored in seed.

**albumin** (ālbū'mīn) *n.* [L. *albumen*, white of egg.] One of a group of heat-coagulable, water-soluble proteins occurring in egg-white, blood serum, milk, and many animal and vegetable tissues.

**albuminoids** (ālbū'mīnoidz) *n. plu.* [L. *albumen*, white of egg; Gk. *eidos*, form.] Scleroproteins, *q.v.*

**albuminous** (ālbū'mīnūs) *a.* [L. *albumen*, white of egg.] *Pert.* containing, or of nature of, albumen or an albumin.

**albuminous cells**,—parenchyma cells associated with sieve cells, as in pteridophytes and gymnosperms.

**alburnum** (ālbūr'nūm) *n.* [L. *albus*, white.] Sap-wood or splint-wood, soft white substance between inner bark and true wood; outer young wood of dicotyledon.

**alecithal** (ālēs'ithāl) *a.* [Gk. *a*, without; *lekithos*, yolk.] With little or no yolk; *appl.* ova; alecithic.

**aletocyte** (ālē'tōsīt) *n.* [Gk. *aletes*, wanderer; *kytos*, hollow.] Wandering cell.

**aleurion** (ālūr'ōn) *n.* [Gk. *aleuron*, flour.] *Appl.* protein grains found in general protoplasm and used as reserve food-material; *appl.* layer containing protein, of endosperm in monocotyledons; aleurone.

**aleurospore** (ālūr'ōspōr) *n.* [Gk. *aleuron*, flour.] A lateral conidium of certain fungous parasites of skin; spore or tip early separated from hypha by a septum.

**alexine** (ālēk'sin) *n.* [Gk. *alexein*, to ward off.] A substance in blood serum which combines with an amboceptor to produce lysis; alexin; complement.

**algēsis** (āl'jē'sis) *n.* [Gk. *algēsis*, sense of pain.] The sense of pain.

**algin** (äl'jīn) *n.* [L. *alga*, seaweed.] A mucilaginous substance, alginic acid, obtained from certain algae.

**algoid** (äl'goid) *a.* [L. *alga*, seaweed; Gk. *eidos*, shape.] *Pert.*, resembling, or of the nature of an alga.

**algology** (älgöl'ōji) *n.* [L. *alga*, seaweed; Gk. *logos*, discourse.] The study of algae; phycology.

**Algonkian** (älgōng'kiān) *a.* [*Algonquian* tribe of Indians.] *Pert.* late Proterozoic era.

**alima** (äl'imä) *n.* [Gk. *halimos*, *pert.* sea.] A larval stage of certain Crustacea.

**alimentary** (äl'imēn'tāri) *a.* [L. *alere*, to nourish.] *Pert.* nutritive functions; *appl.* system, canal, tract, etc.

**alisphenoid** (äl'isfē'noid) *n.* [L. *ala*, wing; Gk. *sphen*, wedge; *eidos*, form.] Wing-like portion of sphenoid forming part of cranium; *ala temporalis*.

**alitrunk** (äl'itrūngk) *n.* [L. *ala*, wing; *truncus*, trunk.] Thorax of insect when fused with first segment of abdomen.

**alkaloid** (äl'käloid) *n.* [Ar. *al*, the; *qali*, ash; Gk. *eidos*, form.] Basic nitrogenous organic substance with poisonous or medicinal properties, as caffeine, morphine, nicotine, strychnine, ptomaine, etc.

**allaesthetic** (äl'ēsthēt'ik) *a.* [Gk. *allos*, other; *aisthetes*, perceiver.] *Appl.* characters effective when perceived by other organisms.

**allanto chorion** (älän'tōkō'rion) *n.* [Gk. *allas*, sausage; *chorion*, skin.] Foetal membrane formed of outer wall of allantois and the primitive chorion; true chorion.

**allantoid** (älän'toid) *a.* [Gk. *allas*, sausage; *eidos*, form.] Sausage-shaped; botuliform.

**allantoin** (älän'toin) *n.* [Gk. *allas*, sausage.] The end-product of purine metabolism, occurring in allantoic fluid and urine of certain mammals;  $C_4H_6O_3N_4$ .

**allantois** (älän'tois) *n.* [Gk. *allas*, sausage.] An embryonic organ, a

membranous sac arising from posterior part of alimentary canal in higher vertebrates, and acting as an organ of respiration or nutrition or both.

**allassotonic** (älās'ōtōn'ik) *a.* [Gk. *allassein*, to change; *tonos*, strain.] Induced by stimulus, *appl.* movements of grown plants; *cf.* auxotonic.

**allele** (älēl') *n.* [Gk. *allelon*, one another.] Allelomorph.

**allelism** (älē'lizm) *n.* [Gk. *allelon*, one another.] The relationship between two alleles; allelomorphism.

**allelocatalysis** (älē'lökātāl'isis) *n.* [Gk. *allelon*, one another; *katalysis*, dissolution.] Allelocatalytic or mutually accelerating or retarding effect of contiguous cells; *e.g.* acceleration of rate of fission with increase in number of individual protozoa present.

**allelomorph** (älē'lōmōrf) *n.* [Gk. *allelon*, one another; *morphe*, form.] One of any pair of alternative hereditary characters; gene which can occupy the same locus as another gene in a particular chromosome.

**allelopathy** (älēlōp'āthi) *n.* [Gk. *allelon*, one another; *pathos*, suffering.] The influence or effect of one living plant upon another.

**allergen** (äl'ērjēn) *n.* [Gk. *allos*, other; *ergon*, activity; *-genes*, producing.] A substance which induces allergy; atopen.

**allergy** (äl'ērji) *n.* [Gk. *allos*, other; *ergon*, activity.] Changed reactivity on second or subsequent infection or poisoning; exaggerated or unusual susceptibility; anaphylaxis; atopy, *q.v.*

**allesthetic**,—allaesthetic, *q.v.*

**alliaceous** (älīā'shūs) *a.* [L. *allium*, garlic.] *Pert.* or like garlic; *appl.* a class of odours.

**allobiosis** (äl'ōbiō'sis) *n.* [Gk. *allos*, other; *biosis*, manner of life.] Changed reactivity of an organism in a changed internal or external environment.

- allocarpy** (āl'ōkārpi) *n.* [Gk. *allos*, other; *karpōs*, fruit.] The production of fruit after cross-fertilisation.
- allochroic** (āl'ōkrō'ik) *a.* [Gk. *allos*, other; *chros*, colour.] Able to change colour; with colour variation.
- allochronic** (āl'ōkrōn'ik) *a.* [Gk. *allos*, other; *chronos*, time.] Not contemporary; *appl.* species, etc. *Opp.* synchronic.
- allochthonous** (ālōk'thōnūs) *a.* [Gk. *allos*, other; *chthon*, the ground.] Exotic; not aboriginal; acquired. *Opp.* autochthonous.
- allocortex** (āl'ōkōr'tēks) *n.* [Gk. *allos*, other; L. *cortex*, bark.] The primitive cortical areas or cortex of olfactory brain, *opp.* isocortex.
- alogamous** (ālōg'āmūs) *a.* [Gk. *allos*, other; *gamos*, marriage.] Reproducing by cross-fertilisation, *opp.* autogamous.
- alogamy** (ālōg'āmī) *n.* [Gk. *allos*, other; *gamos*, marriage.] Cross-fertilisation, *opp.* autogamy.
- alogene** (āl'ōjēn) *n.* [Gk. *allos*, other; *genos*, descent.] A recessive allelomorph; *opp.* protogene.
- alogenic** (ālōjēn'ik) *a.* [Gk. *allos*, other; *genos*, descent.] Caused by external factors; *appl.* plant successions; *pert.* allogenes; derived from elsewhere, *opp.* autogenic; alienous or exogenous, *opp.* endogenous; allochronic, *q.v.*
- alloheteroploid** (āl'ōhēt'ērōploid) *n.* [Gk. *allos*, other; *heteros*, other; *aploos*, onefold; *eidos*, form.] Heteroploid derived from specifically distinct genomes.
- alloiogenesis** (āl'oiōjēn'ēsīs) *n.* [Gk. *alloios*, different; *genesis*, descent.] The alternation, in a life-history, of a sexual and a non-sexual form; alternation of generations.
- alloiometron** (āl'oiōm'ētrōn) *n.* [Gk. *alloios*, different; *metron*, measure.] Measurable change of proportion or intensity of development within species or races, *e.g.* head, limb, tooth, etc. proportions.
- allokinesis** (āl'ōkinē'sis) *n.* [Gk. *allos*, other; *kinesis*, movement.] Reflex, or passive, movement; involuntary movement.
- allometry** (ālōm'ētrī) *n.* [Gk. *allos*, other; *metron*, measure.] Study of relative growth; change of proportions with increase of size; growth rate of a part differing from a standard growth rate or from the growth rate of the whole.
- alloparalectotype** (āl'ōpārālēk'tōtip) *n.* [Gk. *allos*, other; *para*, beside; *lektos*, chosen; *typos*, pattern.] Specimen, from the original collection, of the sex opposite to that of the holotype, and described subsequently.
- allopatric** (ālōpāt'rīk) *a.* [Gk. *allos*, other; *patra*, native land.] Having separate and mutually exclusive areas of geographical distribution. *Opp.* sympatric.
- allopelagic** (āl'ōpēlāj'ik) *a.* [Gk. *allos*, other; *pelagos*, sea.] *Pert.* organisms found at any depth of the sea.
- allopasm** (āl'ōplāzm) *n.* [Gk. *allos*, other; *plasma*, mould.] The differentiated portion of cell-substance not forming independent organelles.
- alloplasmatic** (āl'ōplāzmāt'ik) *a.* [Gk. *allos*, other; *plasma*, mould.] *App.* differentiated portion of cell protoplasm; alloplasmic.
- alloplast** (āl'ōplāst) *n.* [Gk. *allos*, other; *plastos*, formed.] A morphological cell-unit of more than one kind of tissue; *opp.* homoplast.
- allopolyploid** (āl'ōpōl'iploid) *n.* [Gk. *allos*, other; *polys*, many; *aploos*, onefold; *eidos*, form.] An organism with more than two sets of chromosomes derived from different species by hybridisation.
- allorhizal** (āl'ōrī'zāl) *a.* [Gk. *allos*, other; *rhiza*, root.] Having opposed root and shoot poles. *Opp.* homorhizal.
- all-or-none**,—principle that response to a stimulus is either completely effected or is absent, first observed in heart muscle (Bowditch's law).

**allosema** (äl'osēmāt'ik) *a.* [Gk. *allos*, other; *sema*, sign.] Having markings or coloration imitating warning signs in other, usually dangerous, species.

**allosomal** (äl'ösō'māl) *a.* [Gk. *allos*, other; *soma*, body.] *Pert.* allosome; *appl.* inheritance of characters controlled by genes located in an allosome.

**allosome** (äl'ösōm) *n.* [Gk. *allos*, other; *soma*, body.] A chromosome other than an ordinary or typical one; heterochromosome, *cf.* autosome.

**allotostoses** (äl'östō'sēs) *n. plu.* [Gk. *allos*, other; *osteon*, bone.] Bones formed in membrane; *cf.* autostoses.

**allosynapsis**,—allosyndesis, *q.v.*

**allosyndesis** (äl'ösīn'dēsis) *n.* [Gk. *allos*, other; *syndesis*, a binding together.] Pairing of homologous chromosomes from opposite parents, in a polyploid; *cf.* autosyndesis.

**allotetraploid**,—amphidiploid, *q.v.*

**allotherm** (äl'öthērm) *n.* [Gk. *allos*, other; *therme*, heat.] An organism with body temperature dependent on environmental temperature.

**allotrophic** (äl'öt'rōf'ik) *a.* [Gk. *allos*, other; *trophe*, nourishment.] Obtaining nourishment from other organisms; saprophytic, or saprozoic; heterotrophic.

**allotropic** (äl'öt'rōp'ik) *a.* [Gk. *allos*, other; *tropē*, turn.] Exhibiting mutual tropism, as between gametes.

**allotype** (äl'ötīp) *n.* [Gk. *allos*, other; *typos*, pattern.] Paratype of the sex opposite to that of the holotype.

**allozygote** (äl'özi'gōt) *n.* [Gk. *allos*, other; *zygon*, yoke.] A homozygote having recessive characters; *opp.* protozygote.

**alluvial** (äl'üviāl, äloo-) *a.* [L. *alluere*, to wash to.] *Pert.* deposits formed by finely divided material laid down by running water.

**alpha(α) cells**,—oxyphilic cells in pars glandularis of pituitary gland; cells with granules insoluble in alcohol, in islets of Langerhans; A-cells.

**alpha(α) granules**,—metachromatic granules in central region of protoplast, as in blue-green algae.

**alpha(α) tocopherol**,—vitamin E.

**alsinaceous** (älsīnā'shūs) *a.* [Gk. *al-sine*, chickweed.] *Appl.* polypetalous corolla where intervals occur between petals, as in chickweed.

**alteration theory**,—explains electromotive forces of nerve and muscle by alterations in chemical composition of tissue at cross-section.

**alternat** (äl-, öltēr'nāt) *a.* [L. *alternus*, one after another.] Not opposite; *appl.* leaves, branches, etc., occurring at different levels successively on opposite sides of stem; every other; taking turns.

**alternating cleavage**,—spiral cleavage, *q.v.*

**alternation of generations**,—the occurrence in one life-history of two or more different forms differently produced, usually an alternation of a sexual with an asexual form; alioiogenesis; metagenesis; digenesis; heterogamy; heterogenesis; heterogony.

**alternation of parts**,—general rule that leaves of different whorls alternate in position with each other, sepals with petals, stamens with petals.

**alternative inheritance**,—allelism, allelomorphism.

**alterne** (ältēr'n', ôl-) *n.* [L. *alternus*, one after another.] Vegetation exhibiting disturbed zonation due to abrupt change in environment, or to interference with normal plant succession.

**alternipinnate** (ältēr'nīpin'āt, ôl-) *a.* [L. *alternus*, one after another; *pinna*, wing.] *Appl.* leaflets or pinnae arising alternately on each side of mid-rib.

**altrices** (ält'rī'sēz, ält'rīsēz) *n. plu.* [L. *altrix*, nourisher.] Birds whose young are hatched in a very immature condition; *cf.* praecoces.

**altricial** (ält'rīs'iāl) *a.* [L. *altrix*, nourisher.] Requiring care or nursing after hatching or birth.

**alula** (āl'ulā) *n.* [L. *alula*, *dim.* of *ala*, wing.] A small lobe separated off from wing-base on its posterior edge in certain insects; spurious or bastard wing of birds.

**alutaceous** (ālūtā'shūs) *a.* [L. *aluta*, alum-dressed leather.] Tan-coloured; leathery; having appearance of minute cracks, *appl.* markings on elytra of certain beetles.

**alveola** (āl'veölā) *n.* [L. *alveolus*, small cavity.] A pit on the surface of an organ; alveolus, *q.v.*

**alveolar** (āl'veölār) *a.* [L. *alveolus*, small pit.] *Pert.* an alveolus; *pert.* tooth socket; *appl.* artery, nerve, process, canal, in connection with the jaw-bone; *appl.* small cavities in lungs, glands, etc.; *appl.* a theory of structure of protoplasm.

**alveolate** (āl'veölāt, ālv'eölāt) *a.* [L. *alveolatus*, pitted.] Deeply pitted or honey-combed.

**alveolation** (āl'veölā'shūn) *n.* [L. *alveolatus*, pitted.] The formation of alveoli; alveolate appearance.

**alveolus** (ālv'eölūs) *n.* [L. *alveolus*, small pit.] A small pit or depression; tooth socket; pyramidal ossicle, supporting tooth in sea-urchin; air-cell of lung; a cavity in glands; cavity in tarsus of spiders, receptacle for haematochoa; pit for articulation of macrotrichia.

**alveus** (āl'veūs) *n.* [L. *alveus*, cavity.] A white layer of fibres on ventricular surface of hippocampus; utricle of ear; dilatation of thoracic duct.

**amacrine** (ām'ākri'n) *a.* [Gk. *a*, not; *makros*, long; *is*, fibre.] Having no axon; *appl.* cells in inner nuclear layer of retina, with dendrites in inner plexiform layer.

**amb** (āmb) *n.* [L. *ambulare*, to walk.] Ambulacral area.

**ambiens** (ām'biēnz) *n.* [L. *ambire*, to go round.] A thigh muscle in certain birds, the action of which causes the toes to maintain grasp on perch.

**ambient** (ām'biēnt) *a.* [L. *ambire*, to go round.] Surrounding; *appl.*

vein, the costal nervure when encircling insect wing.

**ambiparous** (āmbip'ārūs) *a.* [L. *ambo*, both; *parere*, to produce.] Containing the beginnings of both flowers and leaves; *appl.* buds.

**ambisexual** (ām'bisēk'sūāl) *a.* [L. *ambo*, both; *sexus*, sex.] *Pert.* both sexes; ambosexual; monocious, *q.v.*

**ambisporangiate** (ām'bispórān'jiāt) *a.* [L. *ambo*, both; Gk. *sporos*, seed; *anggeion*, box.] Amphisporangiate, *q.v.*

**ambital** (ām'bitāl) *a.* [L. *ambire*, to go round.] *Appl.* interambulacral and antambulacral plates of asteroids; outer skeleton of ophiuroid arm.

**ambitus** (ām'bitūs) *n.* [L. *ambire*, to go around.] The outer edge or margin; outline of echinoid shell viewed from apical pole.

**amboceptor** (ām'bösēp'tör) *n.* [L. *ambo*, both; *capere*, to take.] A specific antibody or immune body necessary for ferment-like action of complement on a toxin or a red blood corpuscle; a lysin.

**ambon** (ām'bōn) *n.* [Gk. *ambon*, raised platform.] Fibrocartilaginous ring surrounding an articular socket, as around acetabulum; circumferential fibrocartilage; labrum.

**ambosexual** (ām'bösēk'sūāl) *a.* [L. *ambo*, both; *sexus*, sex.] Common to, or *pert.*, both sexes; activated by both male and female hormones.

**ambulacra** (ām'būlāk'rā) *n. plu.* [L. *ambulare*, to walk.] Locomotor tube-feet of echinoderms.

**ambulacralia** (ām'būlāk'rālīā) *n. plu.* [L. *ambulare*, to walk.] Ambulacral plates, *i.e.* plates through which tube-feet protrude.

**ambulacriform** (āmbūlāk'rifōrm) *a.* [L. *ambulare*, to walk; *forma*, shape.] Having the form or appearance of ambulacra.

**ameba**,—amoeba.

**ameiosis** (āmīō'sis) *n.* [Gk. *a*, without; *meiosis*, diminution.] Occurrence of only one division in meiosis instead of two.

**ameiotic** (āmīōt'ik) *a.* [Gk. *a*, without; *meion*, smaller.] *Appl.* parthenogenesis in which meiosis is suppressed.

**amelification** (āmēl'ifikā'shūn) *n.* [M.E. *amell*, enamel; L. *facere*, to make.] Formation of tooth-enamel.

**ameloblast** (āmēl'öbläst) *n.* [M.E. *amell*, enamel; Gk. *blastos*, bud.] A columnar or hexagonal cell of internal epithelium of enamel organ; enamel cell, adamantoblast, ganoblast.

**amentaceous** (āmēntā'shūs), **amentiferous** (āmēntif'ērūs) *a.* [L. *amentum*, thong; *ferre*, to carry.] *Appl.* plants bearing amenta or catkins.

**amentum** (āmēn'tūm) *n.* [L. *amentum*, thong.] A catkin, consisting of bracted axis bearing unisexual flowers, as in poplar and willow; ament.

**ameristic** (āmērīs'tik) *a.* [Gk. *a*, without; *meristos*, divided.] Not divided into parts; unsegmented.

**ametabolic** (āmēt'äböl'ik) *a.* [Gk. *a*, without; *metabole*, change.] *Appl.* insects that do not pass through marked metamorphosis.

**amicron** (āmīk'rōn) *n.* [Gk. *a*, without; *mikros*, small.] An element so small that even the ultramicroscope can only indicate it as a diffuse illumination in the track of the beam; *cf.* submicron.

**amicronucleate** (āmī'krōnū'klēāt) *a.* [Gk. *a*, without; *mikros*, small; L. *nucleus*, kernel.] *Appl.* fragments of certain Protozoa in which there is no micronucleus.

**amine** (ām'īn) *n.* [Gk. *ammoniakon*, resinous gum.] A nitrogen compound formed in plants, also produced by bacterial action on amino acids, a derivative from ammonia by hydrogen replacement.

**amino acids**,—compounds containing amino (NH<sub>2</sub>) and carboxyl (COOH) groups, and produced from proteins by hydrolysis.

**amitosis** (āmītō'sis) *n.* [Gk. *a*, without; *mitos*, thread.] Direct cell-

division and cleavage of nucleus without thread-like formation of nuclear material. *Opp.* mitosis.

**ammonitiferous** (ām'ōnītif'ērūs) *a.* [Gk. *Ammon*, Jupiter; L. *ferre*, to carry.] Containing fossil remains of ammonites.

**amnion** (ām'nīōn) *n.* [Gk. *amnion*, foetal membrane.] A foetal membrane of reptiles, birds, and mammals; inner embryonic membrane of insects; viscous envelope of certain ovules.

**amnionic**,—amniotic.

**amniote** (ām'nīōt) *n.* [Gk. *amnion*, foetal membrane.] An animal characterised by possession of amnion in foetal life.

**amniotic** (ām'nīōt'ik) *a.* [Gk. *amnion*, foetal membrane.] *Pert.* amnion; *appl.* folds, sac, cavity, fluid; amnionic.

**amoeba** (āmē'bā) *n.* [Gk. *amoibe*, change.] A protozoon in which the shape is subject to constant alterations due to formation and retraction of pseudopodia; generally used to typify most primitive animal commonly known.

**amoebadiastase** (āmē'bādī'ästās) *n.* [Gk. *amoibe*, change; *dia*, through; *histanai*, to set.] The digestive ferment secreted by amoebae.

**amoebiform** (āmē'bifōrm) *a.* [Gk. *amoibe*, change; L. *forma*, shape.] Shaped like or resembling an amoeba.

**amoebism** (āmē'bīzm) *n.* [Gk. *amoibe*, change.] Amoeboid form or behaviour, as of leucocytes.

**amoebocyte** (āmē'bōsīt) *n.* [Gk. *amoibe*, change; *kytos*, hollow.] Any cell having the shape or properties of an amoeba; one of certain cells in coelom of echinoderms; a leucocyte, *q.v.*

**amoeboid** (āmē'boid) *a.* [Gk. *amoibe*, change; *eidōs*, shape.] Resembling an amoeba in shape, in properties, or in locomotion.

**amoebula** (āmē'būlā) *n.* [Gk. *amoibe*, change.] The swarm-spore of a protist when furnished with pseudopodia; pseudopodiospore.

- amorphous** (āmôr'fūs) *a.* [Gk. *a*, without; *morphe*, shape.] Of indeterminate or irregular form; with no visible differentiation in structure.
- amphiapomict** (ām'fiāp'ōmīkt) *n.* [Gk. *amphi*, both; *apo*, away; *miktos*, mixed.] A biotype reproduced from facultative sexual forms.
- amphiarthrosis** (ām'fiārthrō'sis) *n.* [Gk. *amphi*, both; *arthron*, joint.] A slightly movable articulation, as a symphysis or a syndesmosis.
- amphiaster** (ām'fiās'tēr) *n.* [Gk. *amphi*, both; *aster*, star.] The two asters connected by the achromatic spindle formed in mitotic cell division.
- amphiastral** (ām'fiās'trāl) *a.* [Gk. *amphi*, both; *aster*, star.] *Appl.* a type of mitosis in which true asters are present at the spindle-poles.
- amphibious** (ām'fīb'iūs), **amphibian** (ām'fīb'iān) *a.* [Gk. *amphi*, both; *bios*, life.] Adapted for life either on land or in water; emerged, *q.v.*
- amphiblastic** (ām'fīblās'tik) *a.* [Gk. *amphi*, both; *blastos*, bud.] *Appl.* telolecithal ova with complete but unequal segmentation.
- amphiblastula** (ām'fīblās'tulā) *n.* [Gk. *amphi*, both; *blastos*, bud.] Stage in development of certain sponges, in which posterior end of embryo is composed of granular archaeocytes, and anterior end of flagellate cells.
- amphibolic** (ām'fībōl'ik) *a.* [Gk. *amphi*, both; *bole*, throw.] Capable of turning backwards or forwards, as outer toe of certain birds.
- amphicarpous** (ām'fikār'pūs) *a.* [Gk. *amphi*, both; *karpōs*, fruit.] Producing fruit of two kinds.
- amphicoelous** (ām'fisē'lūs) *a.* [Gk. *amphi*, both; *koilos*, hollow.] Concave on both surfaces; *appl.* biconcave vertebral centra; amphicelous.
- amphicondylous** (ām'fikōn'dilūs) *a.* [Gk. *amphi*, both; *kondylos*, knuckle.] Having two occipital condyles.
- amphicone** (ām'fikōn) *n.* [Gk. *amphi*, both; *konos*, cone.] Cusp of molar of extinct mammals, believed to have evolved into metacone and paracone.
- amphicribal**,—amphiphloic.
- amphicytes** (ām'fisits) *n. plu.* [Gk. *amphi*, both; *kytos*, hollow.] Endothelial cells surrounding, or forming, capsules of cells of a dorsal root ganglion; capsule cells.
- amphidelphic** (ām'fidēl'fik) *a.* [Gk. *amphi*, both; *delphys*, womb.] Having a paired uterus, as in certain nematodes; didelphic.
- amphidetic** (ām'fidēt'ik) *a.* [Gk. *amphi*, both; *detos*, bound.] Extending behind and in front of umbo; *appl.* hinge ligaments of some bivalve shells; *cf.* opisthodontic.
- amphidiploid** (ām'fidip'loid) *a.* [Gk. *amphi*, both; *diploos*, double.] Double diploid; allotetraploid. *n.* A hybrid having diploid genomes of both parental species.
- amphidisc** (ām'fidisk) *n.* [Gk. *amphi*, both; *diskos*, round plate.] A grapple-shaped spicule of some freshwater sponges.
- amphids** (ām'fidz) *n. plu.* [Gk. *amphi*, both.] Two anterior lateral sensory organs in nematodes.
- amphigastria** (ām'figās'triā) *n. plu.* [Gk. *amphi*, both; *gaster*, stomach.] Rudimentary leaves, or scales, on under surface of foliose liverworts.
- amphigenesis** (ām'fijēn'ēsīs) *n.* [Gk. *amphi*, both; *genesis*, descent.] Amphigony; sexual reproduction.
- amphigonic** (ām'figōn'ik) *a.* [Gk. *amphi*, both; *gone*, seed.] Producing male and female gametes in separate gones in different individuals; bisexual; *pert.* amphigony; *cf.* digonic, syngonic.
- amphigony** (ām'fig'ōnī) *n.* [Gk. *amphi*, both; *gonos*, offspring.] Reproduction involving two individuals; sporogony; amphigenesis.
- amphigynous** (ām'fij'īnūs) *a.* [Gk. *amphi*, both; *gyne*, female.] *Appl.* antheridium surrounding the base of the oogonium, as in some Peronosporales.
- amphikaryon** (ām'fikār'īōn) *n.* [Gk. *amphi*, both; *karyon*, nut.] An amphinucleus or nucleus with large

- karyosome (in reference to supposed encapsulating of kinetic nucleus by trophic nucleus); nucleus with two haploid sets of chromosomes.
- amphimict** (ām'fīmikt) *n.* [Gk. *amphi*, both; *miktos*, mixed.] A biotype resulting from sexual reproduction; an obligate sexual organism.
- amphimixis** (ām'fīmīk'sis) *n.* [Gk. *amphi*, both; *mixis*, mingling.] The mingling of paternal and maternal characteristics by union of male and female pronuclei in fertilisation. *Opp.* apomixis.
- amphinucleolus** (ām'fīnūklē'ölūs) *n.* [Gk. *amphi*, both; L. *nucleolus*, a small kernel.] A double nucleolus comprising basiphil and oxyphil components.
- amphinucleus**,—*amphikaryon*, *q.v.*
- amphiodont** (ām'fīödönt) *a.* [Gk. *amphi*, both; *odous*, tooth.] *Appl.* an intermediate state of mandible development in stag-beetles.
- amphiont** (ām'fīönt) *n.* [Gk. *amphi*, both; *on*, being.] Zygote or sporont formed by coming together of two individuals.
- amphiphloic**,—*periphloic*, *q.v.*
- amphiplatyan** (ām'fīplātīān) *a.* [Gk. *amphi*, both; *platys*, flat.] Flat on both ends; *appl.* vertebral centra.
- amphipneustic** (ām'fīnū'stik, -pn-) *a.* [Gk. *amphi*, both; *pnein*, to breathe.] Having both gills and lungs throughout life-history; with only anterior and posterior pairs of spiracles functioning, as in most dipterous larvae; amphipneustous.
- amphipodous** (ām'fīpōdūs) *a.* [Gk. *amphi*, both; *pous*, foot.] Having feet for walking and feet for swimming.
- amhipyrenin** (ām'fīpīrē'nīn) *n.* [Gk. *amphi*, both; *pyren*, fruit-stone.] Substance of which nuclear membrane is composed.
- amphirhinal** (ām'fīrī'nāl) *a.* [Gk. *amphi*, both; *rhis*, nose.] Having, or *pert.*, two nostrils.
- amphisarca** (ām'fīsār'kā) *n.* [Gk. *amphi*, both; *sarx*, flesh.] A superior indehiscent many-seeded fruit with pulpy interior and woody exterior.
- amphispermous** (ām'fīspēr'mūs) *a.* [Gk. *amphi*, both; *sperma*, seed.] Having seed closely surrounded by pericarp.
- amphisporangiate** (ām'fīspörān'jiāt) *a.* [Gk. *amphi*, both; *sporos*, seed; *angeion*, vessel.] Having sporophylls bearing both megasporangia and microsporangia; hermaphrodite, *appl.* flowers.
- amphispor** (ām'fīspör) *n.* [Gk. *amphi*, both; *sporos*, seed.] A reproductive spore which functions as a resting spore in certain algae mesospore; a uredospore modified to withstand dry environment.
- amphisternous** (ām'fīstēr'nūs) *a.* [Gk. *amphi*, both; *sternon*, breast-bone.] *Appl.* type of sternum structure in Atelostomata.
- amphistomatic** (ām'fīstömāt'ik) *a.* [Gk. *amphi*, both; *stoma*, mouth.] Having stomata on both surfaces, *appl.* certain types of leaves.
- amphistomous** (ām'fīs'tömūs) *a.* [Gk. *amphi*, both; *stoma*, mouth.] Having a sucker at each end of body, as certain worms.
- amphistylic** (ām'fīstil'ik) *a.* [Gk. *amphi*, both; *stylos*, pillar.] Having jaw arch connected with skull by both hyoid and quadrate, or by both hyoid and palato-quadrate; exhibiting condition of amphistyle.
- amphitene** (ām'fītēn) *a.* [Gk. *amphi*, both; *tainia*, band.] Stage of meiosis in which spireme threads are uniting in pairs; zygotene.
- amphithecium** (ām'fīthē'siūm) *n.* [Gk. *amphi*, both; *thekion*, box.] Peripheral layer of cells in sporangia of liverworts and mosses.
- amphitoky** (ām'fīt'ōkī) *n.* [Gk. *amphi*, both; *tokos*, birth.] Parthenogenetic reproduction of both males and females.
- amphitriaene** (ām'fītrī'ēn) *n.* [Gk. *amphi*, both; *triaina*, trident.] A double trident-shaped spicule.



**amphitrichous** (ämfit'rikūs) *a.* [Gk. *amphi*, both; *thrix*, hair.] With flagellum at each pole; *appl.* bacteria; amphitrichate, amphitrichic.

**amphitrocha** (ämfit'rökä) *n.* [Gk. *amphi*, both; *trochos*, wheel.] A free-swimming annelid larva with two rings of cilia.

**amphitropous** (ämfit'röpūs) *a.* [Gk. *amphi*, both; *tropē*, turning.] Having the ovule inverted, with hilum in middle of one side.

**amphixylic**,—perixylic, *q.v.*

**amphocyte** (äm'fösit) *n.* [Gk. *ampho*, both of two; *kytos*, hollow.] An amphophil cell.

**amphogenic** (äm'föjē'ik) *a.* [Gk. *ampho*, both of two; *-genes*, producing.] Producing offspring consisting of both males and females.

**amphophil** (äm'föfil) *a.* [Gk. *ampho*, both of two; *philerē*, to love.] *Appl.* cells staining with basic and acid dyes; amphochromatophil; neutrophil. *n.* Amphocyte.

**amphoteric** (äm'fötēr'ik) *a.* [Gk. *amphotere*, in both ways.] With opposite characters; acidic and also basic.

**amplectant** (ämplēk'tänt) *a.* [L. *amplecti*, to embrace.] Clasping or winding tightly round some support, as tendrils.

**amplexicaul** (ämplēk'siköl) *a.* [L. *amplecti*, to embrace; *caulis*, stem.] Clasping or surrounding the stem, as base of leaf.

**amplexus** (ämplēk'sūs) *n.* [L. *amplexus*, embrace.] Sexual embrace, in batrachians.

**ampliate** (äm'plīāt) *a.* [L. *ampliatius*, made wider.] Having outer edge of wing prominent, as in certain insects.

**amplification** (äm'plifikā'shūn) *n.* [L. *amplificatio*, enlargement.] Changes towards increased structural or functional complexity in ontogeny or phylogeny. *Opp.* reduction.

**ampulla** (ämpool'ä, -pül'-) *n.* [L. *ampulla*, flask.] A membranous vesicle; dilatation of a lactiferous

tubule beneath areola; dilated portion at one end of each semi-circular canal of ear; dilatation of united common bile-duct and pancreatic duct; part of oviduct between infundibulum and isthmus; dilated portion of vas deferens at fundus of urinary bladder; terminal dilatation of rectum; internal reservoir on ring canal of water-vascular system in echinoderms; terminal vesicle of sensory canals of elasmobranchs; submerged bladder of Utricularia.

**ampullaceal** (ämpülä'seäl) *a.* [L. *ampulla*, flask.] Flask-shaped, *appl.* arachnid spinning glands which furnish silk for foundations, lines, and radii; *appl.* sensillae.

**ampullaceous** (ämpülä'seūs) *a.* [L. *ampulla*, flask.] Flask-shaped; *appl.* sensillae.

**ampullary** (ämpool'äri, -pül'-) *a.* [L. *ampulla*, flask.] *Pert.* or resembling an ampulla.

**ampullula** (ämpool'ülä, -pül'-) *n.* [*Dim.* of L. *ampulla*, flask.] A small ampulla, as of some lymphatic vessels.

**ampyx** (äm'piks) *n.* [Gk. *amphyx*, fillet.] A transverse bar connecting the rostralia of Palaeospondylus.

**amyelinic** (ämiēlin'ik) *a.* [Gk. *a*, without; *myelos*, narrow.] Without myelin; *appl.* non-medullated or grey nerve-fibres; amyelinate.

**amygdala** (ämig'dälä) *n.* [L. from Gk. *amygdale*, almond.] Almond; one of palatal tonsils; rounded lobe at side of vallecule of cerebellum.

**amygdalin** (ämig'dälīn) *n.* [Gk. *amygdale*, almond.] A compound occurring in fruit kernels of bitter almonds and other Rosaceae, and producing hydrocyanic acid, glucose and benzaldehyde upon hydrolysis;  $C_{20}H_{17}O_{11}N$ .

**amylase** (äm'iläs) *n.* [L. *amylum*, starch.] An enzyme which converts ( $\alpha$ ) starch into dextrin, or ( $\beta$ ) dextrin into maltose; amylolytic enzyme.

**amyloclastic**,—amylolytic, *q.v.*

**amyloid** (ām'floid) *a.* [Gk. *amylon*, starch; *idos*, form.] Starch-like.  
*n.* Starch-like substance.

**amyloid bodies**,—concretions found in alveoli of adult prostate gland.

**amylolytic** (ām'fllōlīt'ik) *a.* [Gk. *amylon*, starch; *lysis*, loosing.] Starch-digesting, *appl.* enzymes.

**amylome** (ām'fllōm) *n.* [Gk. *amylon*, starch.] Starch-containing wood-parenchyma; layer of starch-containing cells between central cylinder and leptoids of certain moss rhizomes.

**amyloplast** (ām'fllōplāst') *n.* [Gk. *amylon*, starch; *plastos*, formed.] A leucoplast or colourless starch-forming granule in plants; amyloplastid.

**amylopsin** (ām'fllōp'sin) *n.* [Gk. *amylon*, starch; *opsōn*, seasoning.] Pancreatic amylase.

**amylose** (ām'fllōs) *n.* [L. *amylum*, starch.] The substance forming starch.

**amylost atolith** (ām'fllōstāt'ōlith) *n.* [Gk. *amylon*, starch; *statos*, stationary; *lithos*, stone.] A starch grain which moves under the influence of gravity in a statocyte; *cf.* statolith.

**amylum** (ām'fllūm) *n.* [L. *amylum*, starch.] Vegetable starch; ( $C_6H_{10}O_5$ )<sub>*n*</sub>.

**anabiosis** (ān'ābīō'sis) *n.* [Gk. *ana*, up; *bios*, life.] Resuscitation after apparent death; power of revivification, as seen in certain Tardigrada.

**anabolism** (ānāb'ōlizm) *n.* [Gk. *ana*, up; *bole*, throw.] The constructive chemical processes in living organisms, *opp.* katabolism.

**anabolite** (ānāb'ōlīt) *n.* [Gk. *ana*, up; *bole*, throw.] A substance participating in anabolism.

**anacrogynous** (ānāk'rōj'īnūs) *a.* [Gk. *an*, not; *akros*, apex; *gyne*, female.] *Appl.* certain liverworts in which female reproductive bodies do not arise at or near apex of shoot. *Opp.* acrogynous.

**anacromyoidian** (ānāk'rōmīōid'īān) *a.* [Gk. *ana*, up; *akros*, apex; *mys*, muscle; *idos*, form.] With

syringeal muscles attached at dorsal ends of bronchial semi-rings.

**anadromous** (ānād'rōmūs) *a.* [Gk. *ana*, up; *dromein*, to run.] *Appl.* fishes which migrate from salt to fresh water annually. *Opp.* catadromous.

**anaerobe** (ānā'ērōb) *n.* [Gk. *an*, without; *aer*, air; *bios*, life.] An anaerobic organism, capable of living in absence of free oxygen. *Opp.* aerobe. *a.* Anaerobic.

**anaerobiosis** (ānā'ērōbīō'sis) *n.* [Gk. *an*, without; *aer*, air; *biosis*, manner of life.] Existence in absence of free oxygen.

**anaesthesia** (ānēsthē'siā) *n.* [Gk. *an*, without; *aisthesis*, feeling.] Local or general insensibility.

**anagenesis** (ān'ājēn'ēsis) *n.* [Gk. *ana*, again; *genesis*, descent.] Regeneration of tissues; progressive evolution.

**anakinetic** (ān'ākīnēt'ik) *a.* [Gk. *ana*, up; *kinein*, to move.] *Appl.* process which restores energy; *cf.* katakinetic.

**anakinetomeres** (ān'ākīnēt'ōmērz) *n. plu.* [Gk. *ana*, up; *kinein*, to move; *meros*, part.] Energy-rich reactive atoms or molecules.

**anal** (ā'nāl) *a.* [L. *anus*, anus.] *Pert.*, or situated at or near, the anus; *appl.* posterior median ventral fin of fishes, margin and vein of insect wing, posterior ventral scute of reptiles, etc.

**analogues** (ān'ālōgz) *n. plu.* [Gk. *analogia*, proportion.] Organs of different plants or animals with like function but of unlike origin.

**analogy** (ānāl'ōjī) *n.* [G. *analogia*, proportion.] Resemblance in function though not in structure or development.

**anamestic** (ānāmēs'tik) *a.* [Gk. *ana*, up; *mestos*, filled.] *Appl.* small variable bones filling spaces between larger bones of more fixed position, as in fish skulls.

**anamniote** (ānām'niōt) *n.* [Gk. *a*, not; *amnion*, foetal membrane.] An animal which has no amnion in embryonic life.

**anamorpha** (änämôr'fâ) *n. plu.* [Gk. *ana*, backwards; *morphe*, form.] Larvae hatched with incomplete number of segments; *cf.* epimorpha.

**anamorphosis** (än'ämôr'fōsis) *n.* [Gk. *ana*, throughout; *morphosis*, shaping.] Evolution from one type to another through a series of gradual changes.

**anandrous** (änän'drūs) *a.* [Gk. *a*, without; *aner*, male.] Without stamens.

**anangian** (änän'jiän) *a.* [Gk. *a*, without; *angeion*, vessel.] *Appl.* worms without a vascular system.

**anatherous** (än'anthērūs) *a.* [Gk. *a*, without; *antheros*, flowering.] Without anthers.

**anathous** (änän'thūs) *a.* [Gk. *a*, without; *anthos*, flower.] Not flowering; without inflorescence.

**anaphase** (än'áfâz) *n.* [Gk. *ana*, up; *phasis*, appearance.] A stage in mitosis during divergence of daughter chromosomes; the stages of mitosis up to division of chromatin into chromosomes; *cf.* kataphase.

**anaphylaxis** (än'afiläk'sis) *n.* [Gk. *ana*, up; *phylax*, guard.] Condition of being hypersensitive to a serum or foreign protein, caused by first or sensitising dose.

**anaphyte** (än'äfit) *n.* [Gk. *ana*, up; *phyton*, plant.] Transverse segment of a shoot; an internode.

**anaplasia** (änäplä'ziä) *n.* [Gk. *ana*, again; *plassein*, to form.] Undifferentiation; reversion to a less differentiated structure.

**anaplast** (än'äpläst) *n.* [Gk. *ana*, up; *plastos*, formed.] A leucoplastid; anaplastid.

**anapleurite** (än'äploor'it) *a.* [Gk. *ana*, up; *pleura*, side.] Upper thoracic pleurite, as in certain Thysanura.

**anapophysis** (än'äpöf'is) *n.* [Gk. *ana*, up; *apo*, from; *physis*, origin.] A small dorsal projection rising near transverse process in lumbar vertebrae.

**anapsid** (änäp'sid) *a.* [Gk. *ana*, up;

*apsis*, arch.] With skull wholly imperforate or completely roofed over; stegocrotaphic.

**anptychus** (änäp'tikūs) *n.* [Gk. *ana*, throughout; *ptyche*, plate.] Aptychus or operculum consisting of a single plate, as in certain ammonites; *cf.* synaptychus.

**anarthrous** (änär'thrūs) *a.* [Gk. *a*, without; *arthron*, joint.] Having no distinct joints.

**anaschistic** (än'äskis'tik) *a.* [Gk. *ana*, up to; *schistein*, to split.] *Appl.* type of tetrads which divide twice longitudinally in meiosis; *cf.* diaschistic.

**anastates** (än'ästäts) *n. plu.* [Gk. *ana*, up to; *statos*, standing.] Various materials that arise owing to metabolism in a cell, in formation of complex from simple substances. *Opp.* katastates.

**anastomosis** (änäs'tömō'sis) *n.* [Gk. *ana*, up to; *stoma*, mouth.] Union of ramifications of leaf-veins; union of blood-vessels arising from a common trunk; union of nerves; fine threads joining chromonemata in resting nucleus; formation of a network or anastomotic meshwork.

**anastral** (änäs'träl) *a.* [Gk. *an*, not; *aster*, star.] *Appl.* type of mitosis without aster-formation.

**anatomy** (änät'ōmi) *n.* [Gk. *ana*, up; *tome*, cutting.] The science which treats of the structure of plants and of animals, as determined by dissection; usually, human anatomy.

**anatoxin**,—toxoid, *g.v.*

**anatrepsis** (änätrep'sis) *n.* [Gk. *anatrepein*, to turn over.] Stage of increasing movement in blastokinesis.

**anatriaene** (än'ätri'ēn) *n.* [Gk. *ana*, up; *triaena*, trident.] Triaene with backwardly directed branches.

**anatropous** (änät'röpūs) *a.* [Gk. *anatrope*, overturning.] Inverted, *appl.* ovules with hilum and micropyle close together and chalaza at other end; anatropal.

**anaxial** (änäk'siäl) *a.* [Gk. *a*, without; *axis*, axle.] Having no distinct axis; asymmetrical.

- ancestrula** (änsēs'troolă) *n.* [L. *antecedere*, to go before.] First zoecium of polyzoan colony.
- anchor** (äng'kör) *n.* [L. *ancora*, anchor.] Anchor-shaped spicule found in skin of Holothuria.
- anchylosis** (äng'kīlō'sis) *n.* [Gk. *angchein*, to press tight.] Union of two or more bones or hard parts to form one part, *e.g.* of bone to bone, or tooth to bone; ankylosis.
- anconeal** (ängkō'néal) *a.* [Gk. *angkon*, elbow.] *Pert.* the elbow.
- anconeus** (äng'kōnē'ūs) *n.* [Gk. *angkon*, elbow.] Small extensor muscle situated over elbow; anconeus.
- andrase** (än'drās) *n.* [Gk. *aner*, male.] A male-determining factor in form of an enzyme or hormone.
- andrin** (än'drin) *n.* [Gk. *aner*, male.] The testicular androgens.
- androconia** (än'drōkō'niā) *n. plu.* [Gk. *aner*, male; *konía*, dust.] Modified wing-scales producing a sexually attractive scent in certain male butterflies.
- androcyte** (än'drōsīt) *n.* [Gk. *aner*, male; *kytos*, hollow.] A cell arising by growth from an androgonium and giving rise to antherozoid.
- androdioecious** (än'drōdiē'siūs) *a.* [Gk. *aner*, male; *dis*, two; *oikos*, house.] Having male and hermaphrodite flowers on different plants.
- androecium** (ändrē'siüm) *n.* [Gk. *aner*, male; *oikos*, house.] Male reproductive organs of a plant; stamens taken collectively.
- androgametangium** (än'drögäm'-ētän'jiüm) *n.* [Gk. *aner*, male; *gametes*, spouse; *anggeion*, vessel.] A structure producing male sexual cells; antheridium.
- androgen** (än'drōjēn) *n.* [Gk. *aner*, male; *genos*, descent.] A male hormone; a masculinising substance.
- androgenesis** (än'drōjēn'ēsis) *n.* [Gk. *aner*, male; *genesis*, descent.] Development of egg furnished with paternal chromosomes only; male parthenogenesis.
- androgenetic** (än'drōjēnēt'ik) *a.* [Gk. *aner*, male; *genesis*, descent.] Having paternal chromosomes only.
- androgenic** (än'drōjēn'ik) *a.* [Gk. *aner*, male; *gennaín*, to produce.] Stimulating male characters; masculinising; *appl.* hormones; *appl.* tissue capable of elaborating an androgenic hormone; androgenous, *q.v.*
- androgenous** (ändrōj'ēnūs) *a.* [Gk. *aner*, male; *genos*, descent.] Producing only male offspring.
- androgonidia** (än'drögōnīd'ia) *n. plu.* [Gk. *aner*, male; *gonos*, offspring; *idion*, *dim.*] Male sexual elements formed after repeated divisions of parthenogonidia of Volvox.
- androgonium** (än'drögō'nium) *n.* [Gk. *aner*, male; *gonos*, offspring.] An early stage in formation of sperm-cells of plants.
- androgynal** (ändrōj'ināl) *a.* [Gk. *aner*, male; *gyne*, female.] Hermaphrodite; bearing both staminate and pistillate flowers in the same inflorescence; with antheridium and oogonium on the same hypha; androgynous.
- androgynary** (ändrōj'inārī) *a.* [Gk. *aner*, male; *gyne*, female.] Having flowers with stamens and pistils developed into petals.
- androgynae** (än'drōjīn, än'drōgīn) *a., n.* Hermaphrodite.
- androgynism** (ändrōj'inīzm) *n.* [Gk. *aner*, male; *gyne*, female.] The condition of bearing both stamens and pistils; hermaphroditism.
- andromerogony** (än'drömērōg'ōnī) *n.* [Gk. *aner*, male; *meros*, part; *gone*, generation.] The development of an egg fragment with only paternal chromosomes.
- andromonoecious** (än'drömōnē'siūs) *a.* [Gk. *aner*, male; *monos*, alone; *oikos*, house.] Having male and hermaphrodite flowers on the same plant.
- andropetalous** (än'drōpēt'alūs) *a.* [Gk. *aner*, male; *petalon*, leaf.] Having petaloid stamens.
- androphore** (än'drōfōr) *n.* [Gk. *aner*, male; *phora*, carrying.] Stalk supporting androecium or stamens; stalk carrying male gonophores in Siphonophora.

## AND-

**androphyll** (än'dröfil) *n.* [Gk. *aner*, male; *phyllon*, leaf.] The leaf bearing microspores; the microsporangium.

**androsome** (än'drösöm) *n.* [Gk. *aner*, male; *soma*, body.] A male-limited chromosome.

**androsporangium** (än'dröspörän'jium) *n.* [Gk. *aner*, male; *sporos*, seed; *anggeion*, vessel.] A sporangium containing androspores.

**androspore** (än'dröspör) *n.* [Gk. *aner*, male; *sporos*, seed.] An asexual zoospore which gives rise to a male dwarf plant; male spore; microspore; pollen grain.

**androsterone** (än'dröstē'rōn) *n.* [Gk. *aner*, male; *stear*, suet.] Male hormone, present in adrenal cortex, obtained from urine;  $C_{19}H_{30}O_2$ .

**androtype** (än'drötīp) *n.* [Gk. *aner*, male; *typos*, pattern.] Type specimen of the male of a species.

**anelectrotonus** (än'elēktrötō'nūs, än'elēktrötō'nūs) *n.* [Gk. *ana*, up; *elektron*, amber; *tonos*, tension.] Decrease in irritability of a nerve under influence of a non-polarising electric current.

**anellus** (änē'lūs) *n.* [L. *anellus*, little ring.] A small ring-shaped or triangular plate supported by valves and vinculum, in Lepidoptera.

**anemochorous** (änēmökō'rūs) *a.* [Gk. *anemos*, wind; *chore*, place.] Dispersed by wind; with seeds so dispersed.

**anemophilous** (änēmōf'ilūs) *a.* [Gk. *anemos*, wind; *philein*, to love.] Wind-pollinated.

**anemophily** (änēmōf'ili) *n.* [Gk. *anemos*, wind; *philein*, to love.] Plant-fertilisation by agency of wind.

**anemoplankton** (änēm'ōplāngk'tōn) *n.* [Gk. *anemos*, wind; *plāngktos*, wandering.] Wind-borne organisms and living particles; aeroplankton, *q.v.*

**anemosporic** (änēm'ōspör'ik) *a.* [Gk. *anemos*, wind; *sporos*, seed.] Having spores or seeds disseminated by air currents.

**anemotaxis** (änēm'ōtāk'sis) *n.* [Gk. *anemos*, wind; *taxis*, arrange-

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ment.] Directed movement in response to air currents.

**anemotropism** (änēmōt'rōpizm) *n.* [Gk. *anemos*, wind; *tropē*, turn.] Orientation of body, or plant curvature, in response to air currents.

**anencephaly** (änēnkēf'ālī, -sēf'-) *n.* [Gk. *an*, not; *engkephalon*, brain.] Condition of having no brain.

**anenterous** (änēn'tērūs) *a.* [Gk. *an*, without; *enteron*, gut.] Having no alimentary tract; anenteric.

**aner** (än'ēr, änār) *n.* [Gk. *aner*, male.] The male of insects, especially of ants.

**anestrus**,—anoestrus, *q.v.*

**aneucentric** (änūsēn'trik) *a.* [Gk. *a*, without; *eu*, well; *kentron*, centre.] Acentric and dicentric, resulting from translocation involving centromere of a chromosome.

**aneuploid** (än'ūploid) *a.* [Gk. *a*, without; *eu*, well; *aploos*, onefold.] Having fewer or more chromosomes than an exact multiple of the haploid number, *opp.* euploid.

**aneurine** (änū'rīn) *n.* [Gk. *a*, without; *neuron*, nerve.] Vitamin B<sub>1</sub>, the anti-beri-beri factor in yeast, legumes, cereals, and other foods; aneurin; thiamine (U.S.A.);  $C_{12}H_{18}ON_4SCl_2$ .

**aneuronic** (änūrōn'ik) *a.* [Gk. *a*, without; *neuron*, nerve.] Without innervation; *appl.* chromatophores controlled by hormones.

**anfractuose** (änfrāk'tūōs) *a.* [L. *anfractus*, bending.] Wavy, sinuous.

**angienchyma** (än'jīēng'kīmā) *n.* [Gk. *anggeion*, vessel; *engchein*, to pour.] Vascular tissue.

**angiolblast** (än'jīōblāst) *n.* [Gk. *anggeion*, vessel; *blastos*, bud.] One of cells from which lining of blood-vessels is derived; vasoformative cell.

**angiocarpic** (än'jīōkār'pik) *a.* [Gk. *anggeion*, vessel; *karpos*, fruit.] Having fruit enclosed; angiocarpous; *appl.* fungi. *Opp.* gymnocarpic.

**angiology** (än'jiöl'öji) *n.* [Gk. *anggeion*, vessel; *logos*, discourse.] Anatomy of blood and lymph vascular systems.

**angiospermous** (änjiöspër'mūs) *a.* [Gk. *anggeion*, vessel; *sperma*, seed.] Having seeds in a closed case, the ovary.

**angiosporous** (änjiös'pörūs) *a.* [Gk. *anggeion*, vessel; *sporas*, seed.] Having spores contained in a theca or spore capsule.

**angiostomatous** (än'jiöstóm'ätūs) *a.* [Gk. *anggeion*, vessel; *stoma*, mouth.] Narrow-mouthed, *appl.* an order of molluscs, and to a sub-order of snakes, with non-distensible mouth.

**angiotonin** (änjiöt'önin) *n.* [Gk. *angeion*, vessel; *tonos*, tension.] Substance in circulating blood, formed by reaction between hypertensinogen elaborated in the liver, and renin, causing constriction of arterioles; hypertensin.

**ångström** (öng'strēm) *n.* [*A. J. Ångström*, Swedish physicist.] One ten millionth part of a millimetre, symbol Å.

**angular** (äng'gūlär) *n.* [L. *angulus*, corner.] A membrane bone of lower jaw in most vertebrates. *a.* Having, or *pert.*, an angle; *appl.* leaf originating at forking of stem, as in many ferns; *appl.* collenchyma with cell-walls thickened in the angles of the cells.

**angulosplenial** (äng'gūlösplē'niäl) *n.* [L. *angulus*, corner; *splenium*, patch.] Bone forming most of lower and inner part of mandible in Amphibia.

**angulus** (äng'gūlūs) *n.* [L. *angulus*, angle.] An angle, as that formed by junction of manubrium and body of sternum (angle of Louis).

**angustifoliate** (änggūs'tifö'liät) *a.* [L. *angustus*, narrow; *folium*, leaf.] With narrow leaves.

**angustirostrate** (änggūs'tirös'trät) *a.* [L. *angustus*, narrow; *rostrum*, beak.] With narrow beak or snout.

**anholocyclic** (än'hölösk'lik) *a.* [Gk.

*an*, not; *holos*, whole; *kyklos*, circle.] *Pert.* alternation of generations with suppression of sexual part of cycle; permanently parthenogenetic.

**anidian** (än'id'ian) *a.* [Gk. *an*, not; *eidos*, form.] Formless; *appl.* blastoderm without apparent embryonic axis.

**animal pole**,—the upper, more rapidly segmenting, portion of a telolecithal egg. *Opp.* vegetal pole.

**anion** (än'ion, än'ion) *n.* [Gk. *ana*, up; *ienai*, to go.] A negatively-charged particle or ion which moves up towards the anode or positive pole.

**anisocarpous** (än'isökär'pūs) *a.* [Gk. *anisos*, unequal; *karpōs*, fruit.] Having number of carpels less than that of other floral whorls.

**anisocercal** (än'isösär'käl) *a.* [Gk. *anisos*, unequal; *kerkos*, tail.] With lobes of tail-fin unequal.

**anisochela** (än'isökē'lä) *n.* [Gk. *anisos*, unequal; *chele*, claw.] A chela with the two parts unequally developed.

**anisodactylous** (än'isödäk'tilūs) *a.* [Gk. *anisos*, unequal; *daktylos*, finger.] Having unequal toes, three toes forward, one backward.

**anisogamete** (än'isögämēt) *n.* [Gk. *anisos*, unequal; *gametes*, spouse.] One of two conjugating gametes differing in form or size.

**anisogamous** (än'isög'amūs) *a.* [Gk. *anisos*, unequal; *gamos*, marriage.] *Appl.* differentiated gametes or conjugating bodies.

**anisogamy** (än'isög'amī) *n.* [Gk. *anisos*, unequal; *gametes*, spouse.] Conjugation between sharply differentiated gametes; heterogamy.

**anisognathous** (än'isög'näthūs) *a.* [Gk. *anisos*, unequal; *gnathos*, jaw.] With jaws of unequal width; having teeth in upper and lower jaws unlike.

**anisomerous** (än'isöm'erūs) *a.* [Gk. *anisos*, unequal; *meros*, part.] Having unequal numbers of parts in floral whorls.

**anisophylly** (än'isöfil'i) *n.* [Gk. *anisos*, unequal; *phyllon*, leaf.] Condition of having leaves of two or more sizes or shapes, as in some conifers and aquatic plants.

**anisopleural** (än'isöplöo'räl) *a.* [Gk. *anisos*, unequal; *pleura*, side.] Asymmetrical bilaterally.

**anisoploid** (än'isöplöid) *a.* [Gk. *anisos*, unequal; *aploos*, onefold; *eidos*, form.] With an odd number of chromosome sets in somatic cells. *n.* An anisoploid individual.

**anisopogonous** (än'isöpög'önüs) *a.* [Gk. *anisos*, unequal; *pogon*, beard.] Unequally webbed, with reference to feathers.

**anisopterus** (än'isöpt'erüs) *a.* [Gk. *anisos*, unequal; *pteron*, wing.] Unequally winged; *appl.* seeds.

**anisospore** (än'isöspör') *n.* [Gk. *anisos*, unequal; *sporos*, seed.] A dimorphic spore, the sexes differing in size.

**anisostemonous** (än'isöstém'önüs) *a.* [Gk. *anisos*, unequal; *stemon*, spun thread.] Having the number of stamens unequal to the number of parts in other floral whorls; having stamens of unequal size.

**anisotropic** (än'isötöröp'ik) *a.* [Gk. *anisos*, unequal; *trope*, turn.] *Appl.* eggs with predetermined axis or axes; exhibiting anisotropy; doubly refracting, *appl.* dark bands of voluntary muscle fibre. *Opp.* isotropic.

**ankylosis**,—ankylosis, *q.v.*

**ankyroid** (äng'kiroid) *a.* [Gk. *agkyra*, hook; *eidos*, form.] Hook-shaped.

**anlage** (än'lägē) *n.* [Ger. *Anlage*, predisposition.] The first structure or cell group indicating development of a part or organ; inception; primordium; ébauche.

**annectent** (änëk'tënt) *a.* [L. *annectere*, to bind together.] Linking, *appl.* intermediate species or genera.

**annelid** (än'ëlid) *a.* [L. *annulus*, ring; Gk. *eidos*, form.] Constructed of ring-like segments, as ringed worms; *pert.* Annelida.

**annotinous** (ännö'tinüs) *a.* [L. *annus*,

year.] A year old; *appl.* growth during the previous year.

**annual** (än'üäl) *a.* [L. *annus*, year.] *Appl.* structures or features that are marked off or completed yearly; living for a year only.

**annual ring**,—one of the rings, seen in transverse sections of dicotyledons, indicating the secondary growth during a year; growth ring of bivalve shells.

**annular** (än'ülär) *a.* [L. *annulus*, ring.] Ring-like; *appl.* certain ligaments of wrist and ankle; *appl.* (orbicular) ligament encircling head of radius and attached to radial notch of ulna; *appl.* certain lamina or sternal plates in ants; *appl.* certain vessels in xylem, owing to ring-like thickenings in their interior; *appl.* bands formed on inner surface of cell-wall.

**annulate** (än'ülät) *a.* [L. *annulus*, ring.] Ring-shaped; composed of ring-like segments; having colour arranged in ring-like bands or annuli.

**annulus** (än'ülüs) *n.* [L. *annulus*, ring.] Any ring-like structure; special ring in fern sporangium, by action of which sporangium bursts; remains of veil in mushrooms; ring of cells in moss capsule whose rupture causes opening; circular groove for transverse flagellum in Dinoflagellata; ring of annelid; fourth digit of hand.

**anococcygeal** (ä'nököksij'ëäl) *a.* [L. *anus*, anus; *coccyx*; Gk. *kokkyx*, cuckoo.] *Pert.* region between coccyx and anus; *appl.* body of fibrous and muscular tissue, nerves, etc.

**anoestrus** (änë'strüs) *n.* [Gk. *an*, not; *oistros*, gad-fly.] The non-breeding period; period of absence of sexual urge; anoestrus; *cf.* dioestrus.

**anomaly** (änöm'äl) *n.* [Gk. *anomalos*, uneven.] Any departure from type characteristics.

**anomophyllous** (än'ömöfil'üs) *a.* [Gk. *anomos*, lawless; *phyllon*, leaf.] With irregularly placed leaves.

- anorganology** (än'ôrgănöl'ôji) *n.* [Gk. *a*, not; *organon*, instrument; *logos*, discourse.] Study of non-living things; abiology.
- anorthogenesis** (än'ôrthôjën'ësis) *n.* [Gk. *an*, not; *orthos*, straight; *genesis*, descent.] Evolution manifesting changes in direction of adaptations, owing to preadaptation; 'zigzag' evolution.
- anorthospiral** (än'ôrthôspi'räl) *a.* [Gk. *an*, not; *orthos*, straight; *speira*, coil.] Relationally coiled, spirals not interlocking; paraneimic. *Opp.* orthospiral, plectoneimic.
- anosmatic** (änösmät'ík) *a.* [Gk. *a*, without; *osme*, smell.] Having no sense of smell; anosmic.
- anosmia** (änös'miä) *n.* [Gk. *a*, without; *osme*, smell.] Absence or loss of sense of smell.
- anoxybiotic** (änök'sibiôt'ík) *a.* [Gk. *a*, not; *oxys*, sharp; *bios*, means of life.] Capable of living in absence of oxygen; anaerobic.
- ansa** (än'sä) *n.* [L. *ansa*, handle.] Loop, as of certain nerves.
- anserine** (än'sërin) *n.* [L. *anser*, goose.] A constituent of bird's muscle;  $C_{10}H_{16}O_3N_4$ .
- ansiform** (än'siförm) *a.* [L. *ansa*, handle; *forma*, shape.] Loop-shaped; looped; *appl.* outer cytoplasm in cerebro-spinal ganglia.
- antagonist** (äntäg'önist) *n.* [Gk. *antagonistes*, adversary.] A muscle acting in opposition to the action produced by a prime mover or agonist; an antihormone, *q.v.*
- antambulacral** (änt'ämbülä'kräl) *a.* [Gk. *anti*, against; L. *ambulare*, to walk.] Not situated on the ambulacral area; abactinal, *q.v.*
- antapex** (äntäp'ëks) *n.* [Gk. *anti*, opposite; L. *apex*, tip.] Tip of hypocone in Dinoflagellata.
- antapical** (äntäp'ikäl) *a.* [Gk. *anti*, opposite; L. *apex*, tip.] At or *pert.* antapex; *pert.* region opposite apex.
- antebrachium** (än'tëbrä'kiüm) *n.* [L. *ante*, before; *brachium*, arm.] The fore-arm, or corresponding portion of a fore-limb.
- anteclypeus** (än'tëklip'ëüs) *n.* [L. *ante*, before; *clypeus*, shield.] Anterior portion of clypeus when differentiated by suture; *cf.* postclypeus.
- antecosta** (äntëkös'tä) *n.* [L. *ante*, before; *costa*, rib.] Internal ridge of tergum, for attachment of intersegmental muscles in insects, extended to phragma in alar segments.
- antecubital** (än'tëkü'bital) *a.* [L. *ante*, before; *cubitus*, elbow.] Anterior to the elbow.
- antedorsal** (än'tëdör'säl) *a.* [L. *ante*, before; *dorsum*, back.] Situated in front of dorsal fin in fishes.
- antefrons** (än'tëfrönz) *n.* [L. *ante*, before; *frons*, forehead.] The portion of frons anterior to anten-nary base line in certain insects.
- antelabrum** (äntälä'brüm) *n.* [L. *ante*, before; *labrum*, lip.] The anterior portion of insect labrum when differentiated.
- antemarginal** (än'tëmär'jinal) *a.* [L. *ante*, before; *margo*, edge.] *Appl.* sori of ferns when they lie within margin of frond.
- antenna** (äntën'ä) *n.* [L. *antenna*, sail-yard.] A jointed feeler on head of various Arthropoda.
- antennary** (äntën'äri) *a.* [L. *antenna*, sail-yard.] Like, or *pert.*, or situated near an antenna; antennal.
- antennifer** (äntën'ifer) *n.* [L. *antenna*, sail-yard; *ferre*, to carry.] Socket of antenna in arthropods; projection on rim of antennal socket, acting as a pivot, in myriopods.
- antennule** (äntën'ül) *n.* [L. *dim.* from *antenna*.] A small antenna or feeler, specifically the first pair of antennae in Crustacea.
- anteponition** (än'tëpözish'ün) *n.* [L. *ante*, before; *ponere*, to place.] Superposition of whorls in a flower typically alternating.
- anterior** (äntë'riör) *a.* [L. *anterior*, former.] Nearer head end; ventral in human anatomy; facing outwards from axis; previous.
- anterolateral**,—ventrolateral.



**antesternite** (än'těstēr'nit) *n.* [L. *ante*, before; *sternum*, breast-bone.] Anterior sternal sclerite of insects; basisternum, eusternum.

**anthela** (änthē'lā) *n.* [Gk. *anthein*, to bloom.] The cymose inflorescence of the rush family.

**anthelix**,—*antihelix*, *g.v.*

**anther** (än'thēr) *n.* [Gk. *antheros*, flowering.] The part of stamen which produces pollen.

**antherid**,—*antheridium*.

**antheridia**,—*plu.* of antheridium.

**antheridial cell**,—the larger of two cells derived from a microspore and giving rise to an antheridium, or to a cell representing an antheridium.

**antheridiophore** (änthērid'īōfōr) *n.* [Gk. *anthos*, flower; *idion*, *dim.*; *pherein*, to bear.] A gametophore bearing antheridia.

**antheridium** (änthērid'ium) *n.* [Gk. *anthos*, flower; *idion*, *dim.*] An organ or receptacle in which male sexual cells are produced in many cryptogams; male gametangium; cluster of microgametes, as in certain Flagellata.

**antherozooids** (än'thērōzō'idz), **antherozooids** (än'thērōzō'oidz) *n. plu.* [Gk. *anthos*, flower; *zoon*, animal; *eidōs*, *form.*] Male sexual cells in antheridia.

**anthesis** (änthē'sis) *n.* [Gk. *anthos*, flower.] Stage or period at which flower-bud opens; flowering; period of flowering.

**anthoblast** (än'thōblāst) *n.* [Gk. *anthos*, flower; *blastos*, bud.] In Madrepোরaria, a young sessile polyp producing anthocyathus.

**anthocarpous** (än'thōkār'pūs) *a.* [Gk. *anthos*, flower; *karpos*, fruit.] *Appl.* aggregated fruits, products of fusion of several flowers, as sorosis and syconus.

**anthocaulis** (än'thōkōl'is) *n.* [Gk. *anthos*, flower; L. *caulis*, stem.] The pedicle of a late trophozooid stage of madrepor development.

**anthocodia** (än'thōkō'diā) *n.* [Gk. *anthos*, flower; *kōdeia*, head.] The distal portion of a zooid bearing mouth and tentacles, in Alcyonaria.

**anthocyanin** (än'thōsī'änin) *n.* [Gk. *anthos*, flower; *kyanos*, dark blue.] One of the blue or violet pigments of flowers, leaves, and stems.

**anthocyathus** (än'thōsī'äthūs) *n.* [Gk. *anthos*, flower; *kyathos*, cup.] The discoid crown of trophozooid stage in madrepor development.

**anthodium** (änthō'dium) *n.* [Gk. *anthos*, flower; *eidōs*, *form.*] Capitulum or head of Compositae.

**anthogenesis** (än'thōjēn'ēsis) *n.* [Gk. *anthos*, flower; *genesis*, descent.] In certain aphids, production of both males and females by asexual forms.

**anthophilous** (änthōf'ilūs) *a.* [Gk. *anthos*, flower; *philein*, to love.] Attracted by flowers; feeding on flowers.

**anthophore** (än'thōfōr) *n.* [Gk. *anthos*, flower; *pherein*, to bear.] Elongation of thalamus between calyx and corolla.

**anthophyte** (än'thōfit) *n.* [Gk. *anthos*, flower; *phyton*, plant.] A flowering plant; phaenogam, phanerogam, spermatophyte.

**anthostrobilus** (än'thōstrōb'ilūs) *n.* [Gk. *anthos*, flower; *strobilos*, fircone.] Fructification or flower of certain cycads.

**anthotaxis** (än'thōtāk'sis) *n.* [Gk. *anthos*, flower; *taxis*, arrangement.] Arrangement of flowers on an axis.

**anthoxanthin** (än'thōzän'thin) *n.* [Gk. *anthos*, flower; *xanthos*, yellow.] A yellow pigment of flowers.

**anthropeic** (änthrōpē'ik) *a.* [Gk. *anthropeios*, by human means.] Due to influence of man.

**anthropogenesis** (än'thrōpōjēn'ēsis) *n.* [Gk. *anthropos*, man; *genesis*, descent.] The ontogenesis and phylogenesis of man; descent of man.

**anthropogenetic** (än'thrōpōjēnēt'ik) *a.* [Gk. *anthropos*, man; *genesis*, descent.] *Pert.* anthropogenesis.

**anthropogenic** (än'thrōpōjēn'ik) *a.* [Gk. *anthropos*, man; *genos*, descent.] Produced or caused by man.

**anthropoid** (än'thröpoid) *a.* [Gk. *anthropos*, man; *eidōs*, form.] Resembling man; *appl.* tailless apes.

**anthropology** (än'thröpöl'öjī) *n.* [Gk. *anthropos*, man; *logos*, discourse.] The natural history of man.

**anthropometry** (än'thröpöm'ëtrī) *n.* [Gk. *anthropos*, man; *metron*, measure.] That part of biology dealing with proportional measurements of parts of the human body.

**anthropomorphous** (än'thröpömôr'fūs) *a.* [Gk. *anthropos*, man; *morphe*, shape.] Resembling man.

**anthropotomy** (än'thröpöt'ömī) *n.* [Gk. *anthropos*, man; *temnein*, to cut.] Human anatomy.

**antiae** (än'tiē) *n. plu.* [L. *antiae*, forelock.] Feathers at base of bill-ridge of some birds.

**anti-apex**,—lower end of axis, as in rootless plants.

**antiauxin** (än'tiōks'in) *n.* [Gk. *anti*, against; *auxein*, to grow.] An organic compound which regulates or inhibits growth stimulation by auxins.

**antibiosis** (än'tibiō'sis) *n.* [Gk. *anti*, against; *bios*, life.] Antagonistic association of organisms, as by production of harmful compounds.

**antiblastic** (äntiblās'tik) *a.* [Gk. *anti*, against; *blastos*, bud.] *Appl.* immunity due to forces which inhibit growth of invading organism.

**antibody** (än'tiböd'tī) *n.* [Gk. *anti*, against; A.S. *bodig*, body.] Any substance formed in blood which reacts with a specific antigen, or antagonises toxins.

**antibrachial** (än'tibrä'kiäl) *a.* [Gk. *anti*, against; L. *brachium*, arm.] *Peri.* forearm; *appl.* fascia, muscles, vein, nerves; also antebrachial.

**antibrachium**,—antebrachium, *q.v.*

**anticipation** (än'tisipä'shün) *n.* [L. *ante*, before; *capere*, to take.] The manifestation of a condition or disease at a progressively earlier age in successive generations.

**anticlinal** (än'tiklī'näl) *a.* [Gk. *anti*, against; *klinein*, to slope.] *Appl.* line of division of cells at right angles to surface of apex of a growing point; in quadrupeds, *appl.* one of lower thoracic vertebrae with upright spine towards which those on either side incline.

**anticoagulin** (än'tikōäg'ülīn) *n.* [Gk. *anti*, against; L. *coagulum*, rennet.] A substance which prevents coagulation of drawn blood, as hirudin.

**anticryptic** (än'tikrip'tik) *a.* [Gk. *anti*, against; *kryptos*, hidden.] *Appl.* protective coloration facilitating attack.

**anticubital**,—antecubital, *q.v.*

**antidiuretic** (än'tidiürët'ik) *a.* [Gk. *anti*, against; *dia*, through; *ouron*, urine.] Reducing the volume of urine; *appl.* a hormone of posterior lobe of pituitary gland.

**antidromic** (äntid'römik) *a.* [Gk. *anti*, against; *dromos*, running.] Contrary to normal direction; *appl.* conduction of impulse along axon towards body of nerve cell; antidromous; *appl.* stipules with fused outer margins.

**antidromy** (äntid'römī) *n.* [Gk. *anti*, against; *dromos*, running.] Condition of spiral phyllotaxis with genetic spiral changing direction after each cycle.

**anti-enzyme** (än'tiēnzīm) *n.* [Gk. *anti*, against; *en*, within; *zyme*, leaven.] A substance which retards or stops enzyme activity.

**antigen** (än'tijēn) *n.* [Gk. *anti*, against; *genos*, birth.] Substance which causes a series of physiologico-chemical changes resulting in formation of antibodies.

**antigeny**,—sexual dimorphism.

**antihelix** (än'tihē'lik) *n.* [Gk. *anti*, against; *helix*, a convolution.] The curved prominence in front of helix of ear.

**antihormones** (än'tihôr'mōnz) *n. plu.* [Gk. *anti*, against; *hormaein*, to excite.] Substances which prevent the effect of hormones; chalones, *q.v.*

**antimeres** (än'timērz) *n. plu.* [Gk. *anti*, opposite; *meros*, part.] Corresponding parts, as left and right limbs, of a bilaterally symmetrical animal; a series of equal radial parts of a radially symmetrical animal.

**antineuritic** (än'tinūrīt'ik) *a.* [Gk. *anti*, against; *neuron*, nerve.] *Appl.* vitamin B<sub>1</sub>, lack of which causes polyneuritis.

**antipepsin** (än'tipēp'sin) *n.* [Gk. *anti*, against; *pepsis*, digestion.] A stomach secretion which prevents action of pepsin on tissue proteins.

**antiperistalsis** (än'tipēristāl'sis) *n.* [Gk. *anti*, against; *peri*, around; *stalsis*, contraction.] Reversed peristalsis; peristaltic action in postero-anterior direction.

**antipetalous** (än'tipēt'älüs) *a.* [Gk. *anti*, opposite; *petalon*, petal.] With stamens opposite petals.

**antipodal** (äntip'ödäl) *a.* [Gk. *anti*, against; *pous*, foot.] *Appl.* group of three cells at chalazal end of embryo-sac; *appl.* cone of astral rays opposite spindle fibres.

**antipygidial** (än'tipijid'äl) *a.* [Gk. *anti*, against; *pygidion*, narrow rump.] *Appl.* bristles of seventh abdominal segment which extend to pygidium, in fleas.

**antirachitic** (än'tiräkīt'ik) *a.* [Gk. *anti*, against; *rhachis*, spine.] *Appl.* vitamin D, lack of which causes rickets.

**antiscorbutic** (än'tiskōrbūt'ik) *a.* [Gk. *anti*, against; L.L. *scorbutus*, scurvy.] *Appl.* vitamin C, lack of which causes scurvy.

**antisepalous** (än'tisēp'älüs) *a.* [Gk. *anti*, opposite; F. *sépale*, from L. *separare*, to separate.] With stamens opposite sepals.

**antiseptic** (än'tisēp'tik) *a.* [Gk. *anti*, against; *sepsis*, putrefaction.] Preventing putrefaction. *n.* A substance which destroys harmful micro-organisms.

**antispadix** (än'tispā'diks) *n.* [Gk. *anti*, against; *spadix*, palm branch.] A group of four modified tentacles in internal lateral lobes of Nautilus.

**antisquama** (än'tiskwā'mä) *n.* [Gk. *anti*, against; L. *squama*, scale.] Basal lobe next squama of insect wing; squama alaris or antitegula.

**antistyle** (än'tistil) *n.* [Gk. *anti*, against; L. *stilus*, pricker.] Basal projection of stylifer in certain insects.

**antitegula** (än'titēg'ülä) *n.* [Gk. *anti*, against; L. *tegula*, tile.] Antisquama, *q.v.*

**antithetic** (än'tithēt'ik) *a.* [Gk. *antithesis*, opposition.] *Appl.* alternation of diploid and haploid generations, or of sporophyte and gametophyte generations.

**antithrombin** (än'tithröm'bīn) *n.* [Gk. *anti*, against; *thrombos*, clot.] A substance, as formed in liver, which prevents clotting of blood.

**antitoxin** (än'titök'sin) *n.* [Gk. *anti*, against; *toxikon*, poison.] A substance or antibody which neutralises or binds a toxin.

**antitragus** (än'titrā'gūs) *n.* [Gk. *anti*, against; *tragos*, goat.] Prominence opposite tragus of external ear.

**antitrochanter** (än'titrökän'tēr) *n.* [Gk. *anti*, against; *trochanter*, a runner.] In birds, an articular surface on ilium against which trochanter of femur plays.

**antitropic** (än'titröp'ik) *a.* [Gk. *anti*, against; *trope*, turn.] Turned or arranged in opposite directions; arranged to form bilaterally symmetric pairs, as ribs of opposite sides; *cf.* syntropic.

**antitropous** (äntit'röpūs) *a.* [Gk. *anti*, against; *trope*, turn.] Inverted; *appl.* embryos with radicle directed away from hilum; antitropal.

**antlia** (änt'liä) *n.* [L. *antlia*, pump.] The spiral suctorial proboscis of Lepidoptera.

**antorbital** (äntör'bital) *a.* [L. *ante*, before; *orbis*, circle.] Situated in front of orbit; *appl.* bone, cartilage, process.

**antrum** (än'trüm) *n.* [L. *antrum*, cavity.] A cavity or sinus; *e.g.*, maxillary sinus, cavity of pylorus.

**anurous** (ănŭ'rūs) *a.* [Gk. *a*, without ; *oura*, tail.] Tailless.

**anus** (ănŭs) *n.* [L. *anus*, anus.] Posterior opening of alimentary canal.

**aorta** (âôr'tă) *n.* [Gk. *aorte*, the great artery.] The great trunk artery which carries pure blood to the body through arteries and their branches.

**aortic** (âôr'tik) *a.* [Gk. *aorte*, the great artery.] *Pert.* aorta ; *appl.* arch, hiatus, isthmus, lymph glands, semilunar valves, etc.

**aortic bodies**,—two small masses of chromaffin cells in a capillary plexus, one on each side of foetal abdominal aorta, being part of system for controlling oxygen content and acidity of blood ; Zuckerkandl's bodies.

**apatetic** (âp'âtē'tik) *a.* [Gk. *apatet-ikos*, fallacious.] *Appl.* misleading coloration.

**aperispermic** (âpēr'ispēr'mik) *a.* [Gk. *a*, without ; *peri*, around ; *sperma*, seed.] *Appl.* seeds without nutritive tissue.

**apertura piriformis**,—anterior nasal aperture of skull.

**apetalous** (âpēt'ălŭs) *a.* [Gk. *a*, without ; *petalon*, petal.] Without petals ; monochlamydeous.

**apex** (â'pĕks) *n.* [L. *apex*, summit.] Tip or summit, as of lungs, heart, nose ; styloid process of fibula ; tip of epicone in Dinoflagellata ; wing tip in insects.

**aphanipterous** (âf'ânĭp'tĕrŭs) *a.* [Gk. *aphanes*, unseen ; *pteron*, wing.] Apparently without wings.

**apheliotropism** (âfĕ'liôt'rôpĭzm) *n.* [Gk. *apo*, away ; *helios*, sun ; *trope*, turn.] Tendency to turn away from light ; phototropism.

**aphlebia** (âflĕb'yă) *n.* [Gk. *a*, without ; *phleps*, vein.] Lateral outgrowth from base of frond-stalk in certain ferns.

**aphodal** (âf'ôdăl) *a.* [Gk. *apo*, away ; *hodos*, path.] *Appl.* type of canal system in sponges.

**aphodus** (âf'ôdŭs) *n.* [Gk. *aphodos*, departure.] The short tube leading

from flagellate chamber to excurrent canal in a type of canal system in sponges.

**aphotic** (âfô'tik) *a.* [Gk. *a*, without ; *phos*, light.] *Pert.* absence of light ; *appl.* zone of deep sea where daylight fails to penetrate. *Opp.* photic.

**aphyllous** (âfil'ŭs) *a.* [Gk. *a*, without ; *phyllon*, leaf.] Without foliage leaves.

**aphylly** (âfil'ĭ) *n.* [Gk. *a*, without ; *phyllon*, leaf.] Suppression or absence of leaves.

**apical** (âp'ikăl) *a.* [L. *apex*, summit.] At tip or summit ; *pert.* distal end ; *appl.* cell at tip of growing point ; *appl.* meristem ; *appl.* style arising from summit of ovary ; *appl.* dominance, of terminal bud ; *appl.* aboral plates of echinoderms ; *appl.* neural plate of trochophore and tornaria.

**apiculate** (âpĭk'ŭlăt) *a.* [*Dim.* of L. *apex*, summit.] Forming abruptly to a small tip, as leaf.

**apiculus** (âpĭk'ŭlŭs) *n.* [*Dim.* of L. *apex*, summit.] A small apical termination, as in some protozoa, or of certain spores ; reflexed portion of antennal club, in some Lepidoptera.

**apilary** (âpil'ărl) *a.* [Gk. *a*, not ; *pilos*, felt cap.] Having upper lip wanting or suppressed in corolla.

**apitoxin** (âpitôk'sĭn) *n.* [L. *apis*, bee ; Gk. *toxikon*, poison.] Main toxic fraction of bee venom.

**apituitarism** (âp'itŭ'itărĭzm) *n.* [L. *a*, away ; *pituita*, phlegm.] Absence or deficiency of pituitary gland secretion ; hypophyphism.

**aplacental** (âp'lăsĕn'tăl) *a.* [L. *a*, away ; *placenta*, flat cake.] Having no placenta, as monotremes.

**aplanogametangium** (âplăn'ôgămĕ-tăn'jĭŭm) *n.* [Gk. *a*, not ; *planos*, wandering ; *gametes*, spouse ; *anggeion*, vessel.] Cell in which aplanogametes are formed.

**aplanogamete** (âplăn'ôgămĕt') *n.* [Gk. *a*, not ; *planos*, wandering ; *gametes*, spouse.] A non-motile conjugating germ-cell of various plants and animals.

- aplanospore** (äplän'öspör) *n.* [Gk. *a*, not; *planos*, wandering; *sporos*, seed.] A non-motile resting spore of algae; an encysted spore of fungi; aplanoplastid. *Opp.* planospore.
- aplasia** (äplä'ziä) *n.* [Gk. *a*, without; *plassein*, to mould.] Arrested development; non-development.
- aplerotic** (äplērō'tik) *a.* [Gk. *a*, not; *pleroun*, to fill.] Not entirely filling a space; *appl.* oospore not extended to oogonial wall. *Opp.* plerotic.
- aploperistomatous** (äp'löpēr'istöm'-ätüs) *a.* [Gk. *aploos*, single; *peri*, around; *stoma*, mouth.] Having a peristome with one row of teeth, as mosses.
- aplostemonous** (äp'löstēm'önüs) *a.* [Gk. *aploos*, single; *stemon*, spun thread.] With a single row of stamens.
- apneustic** (äpnū'stik) *a.* [Gk. *a*, without; *pneustos*, breath.] With spiracles closed or absent; *appl.* aquatic larvae of certain insects.
- apobiotic** (äp'obiōt'ik) *a.* [Gk. *apo*, away; *bios*, life.] Causing or *pert.* decrease in vital energy of cells or tissue; *pert.* apobiosis or physiological death, *opp.* death of entire body.
- apocarpous** (äp'ökâr'püs) *a.* [Gk. *apo*, away; *karpōs*, fruit.] Having separate or partially united carpels. *Opp.* syncarpous.
- apocarpus**,—apocarpous condition.
- apochlorosis** (äp'öklörō'sis) *n.* [Gk. *apo*, away; *chloros*, grass green.] The absence of chlorophyll, in Flagellata.
- apocrine** (äp'ökrîn) *a.* [Gk. *apo*, away; *krinein*, to separate.] *Appl.* glands secreting only part of cell contents; *cf.* holocrine, merocrine.
- apocyte** (äp'ösit) *n.* [Gk. *apo*, away; *kytos*, hollow.] A multinucleate cell; a plurinucleate mass of protoplasm.
- apodal** (äp'ödäl), **apodous** (äp'ödüs) *a.* [Gk. *a*, without; *pous*, foot.] Having no feet; without ventral fin.
- apodema** (äp'ödē'mä) *n.* [Gk. *apo*, away; *demas*, body.] An internal skeletal projection in Arthropoda; apodeme.
- apo-enzyme** (äp'öen'zim) *n.* [Gk. *apo*, away; *en*, in; *zyme*, leaven.] Specific protein part of an enzyme, requiring co-enzyme for action.
- apogamy** (äpög'ämi) *n.* [Gk. *apo*, away; *gamos*, marriage.] Reproduction without intervention of sexual organs.
- apogeotropic** (äp'öjē'ötröp'ik) *a.* [Gk. *apo*, away; *gaia*, earth; *trope*, turn.] Turning away from the earth; ageotropic.
- apogeotropism** (äp'öjēöt'röpizm) *n.* [Gk. *apo*, away; *gaia*, earth; *trope*, turn.] Tendency to act contrarily to law of gravity; negative geotropism.
- apolegamic** (äp'ölēgäm'ik) *a.* [Gk. *apolegein*, to choose; *gamos*, marriage.] *Appl.* mating associated with sexual selection.
- apomeiosis** (äp'ömiō'sis) *n.* [Gk. *apo*, away; *meion*, smaller.] Sporogenesis without haplois.
- apomict** (äp'ömikt) *n.* [Gk. *apo*, away; *miktos*, mixed.] A biotype resulting from apogamy and vegetative propagation.
- apomixis** (äp'ömik'sis) *n.* [Gk. *apo*, away; *mixis*, a mixing.] A reproductive anomaly in plants akin to parthenogenesis, but including development from cells other than ovules. *Opp.* amphimixis.
- aponeurosis** (äp'önürō'sis) *n.* [Gk. *apo*, from; *neuron*, sinew.] The flattened tendon for insertion of, or membrane investing, certain muscles.
- apopetalous** (äp'öpēt'älüs) *a.* [Gk. *apo*, away; *petalon*, leaf.] With free petals; *cf.* apetalous.
- apophyllous** (äp'öfil'üs) *a.* [Gk. *apo*, away; *phyllon*, leaf.] *Appl.* the parts of a single perianth whorl when they are free leaves.

**apophysis** (äpöf'ísís) *n.* [Gk. *apo*, away; *phyein*, to grow.] Process from a bone, usually for muscle attachment; endosternite or sternal apodeme; swelling beneath reproductive structure on fungal hypha; photosynthetic region forming swelling at base of capsule in some mosses; small protuberance at apex of ovuliferous scale in pine.

**apoplasmodial** (äp'öpläsmö'diäl) *a.* [Gk. *apo*, away; *plasma*, something moulded.] Not forming a typical plasmodium.

**apopyle** (äp'öpil) *n.* [Gk. *apo*, away; *pyle*, gate.] Exhalant pore of sponge.

**aporogamy** (äpörög'ämī) *n.* [Gk. *a*, without; *poros*, channel; *gamos*, marriage.] Fertilisation without entry of pollen-tube through micropyle of ovule, *opp.* porogamy.

**aporrhysa** (äpör'ísä) *n. plu.* [Gk. *aporrhēin*, to flow away.] Exhalant canals in sponges; *opp.* epirrhysa.

**aposematic** (äp'ösēmät'ik) *a.* [Gk. *apo*, away; *sema*, signal.] *Appl.* warning colours which serve to frighten away enemies.

**aposporogony** (äp'öspörög'öni) *n.* [Gk. *apo*, away; *sporos*, seed; *gonos*, birth.] Absence of sporogony.

**apospory** (äpös'pöri) *n.* [Gk. *apo*, away; *sporos*, seed.] Production of a gametophyte from a sporophyte without intervention of spore-formation.

**apostasis** (äpös'täsís) *n.* [Gk. *apo*, away; *stasis*, standing.] Condition of abnormal growth of axis which thereby causes separation of perianth whorls from one another.

**apostrophe** (äpös'tröfē) *n.* [Gk. *apo*, away; *strophe*, turn.] Arrangement of chloroplasts along lateral walls of leaf cells.

**apothecium** (äp'öthē'siüm, -shlüm) *n.* [Gk. *apo*, away; *theke*, cup.] A cup-shaped ascocarp; ascocarp of lichens.

**apotome** (äp'ötöm) *n.* [Gk. *apo*, away; *tome*, a cutting.] A part appearing as if cut off, as from episternum, trochanter, etc., in Arthropoda.

**apotracheal** (äpöträ'kēäl) *a.* [Gk. *apo*, away; L. *trachea*, windpipe.] With xylem parenchyma independent of vessels, or dispersed; *appl.* wood.

**apotropous** (äpöt'röpüs) *a.* [Gk. *apo*, away; *trope*, turn.] Anatropal and with ventrally - situated raphe.

**apotype**,—hypotype, *q.v.*

**apparato reticulare**,—see Golgi complex.

**appendage** (äpën'dēj) *n.* [L. *ad*, to; *pendere*, to hang.] An organ or part attached to a trunk, as a limb, branch, etc.; a hyphal or rigid structure for attachment or detachment of perithecium to or from mycelium, varying in structure and function in different Ascomycetes.

**appendices colli** (äpën'disēz kölf) *n. plu.* [L. *ad*, to; *pendere*, to hang; *collum*, neck.] Exterior throat appendages or tassels, of goat, sheep, pig, etc.

**appendicular** (äp'ëndik'ülär) *a.* [L. *ad*, to; *pendere*, to hang.] *Pert.* appendages; *appl.* skeleton of limbs, *opp.* axial skeleton; *pert.* vermiform appendix; *appl.* artery.

**appendiculate** (äp'ëndik'ülät) *a.* [L. *ad*, to; *pendere*, to hang.] Having a small appendage, as a stamen or filament.

**appendix** (äpën'diks) *n., appendices* (äpën'disēz) *plu.* [L. *ad*, to; *pendere*, to hang.] An outgrowth, especially the vermiform appendix.

**applanate** (äpl'anät) *a.* [L. *ad*, to; *planatus*, flattened.] Flattened.

**apposition** (äp'özish'ün) *n.* [L. *ad*, to; *ponere*, to place.] The formation of successive layers in growth of a cell wall; *cf.* intussusception.

**appressorium** (äp'rësö'riüm) *n.* [L. *ad*, to; *pressare*, to press.] Adhesive disc, as of haustorium or sucker.

**aproterodont** (ăprôt'ērödönt) *a.* [Gk. *a*, without; *proteros*, first; *odous*, tooth.] Having no premaxillary teeth.

**apteria** (ăptē'riă) *n. plu.* [Gk. *a*, without; *pteron*, wing.] Naked or down-covered surfaces between pterylae or feather-tracts.

**apterous** (ăp'tērūs) *a.* [Gk. *a*, without; *pteron*, wing.] Wingless; having no wing-like expansions on stems or petioles; exalate.

**apterygial** (ăp'tērij'îăl) *a.* [Gk. *a*, without; *pterygion*, *dim.* of *pteron*, wing.] Wingless; without fins.

**apterygotous** (ăptērigō'tūs) *a.* [Gk. *a*, without; *pterygotos*, winged.] Resembling or *pert.* primitive wingless insects.

**aptychus** (ăpt'îkūs) *n.* [Gk. *a*, without; *ptyche*, fold.] A horny or calcareous structure, possibly an operculum, of ammonites.

**apylene** (ăpî'rēn) *a.* [Gk. *a*, not; *pyren*, fruit-stone.] *Appl.* spermatozoa lacking nucleus; *cf.* eupyrene, oligopyrene; seedless, *appl.* certain cultivated fruits.

**aquatic** (ăkwăt'îk) *a.* [L. *aqua*, water.] *Pert.* water; living in or frequenting water. *n.* An aquatic plant.

**aqueduct** (ăk'wēdūkt) *n.* [L. *aqua*, water; *ducere*, to lead.] A channel or passage, as that of cochlea, and of vestibule of ear; aquae-ductus.

**aqueduct of Sylvius** [*F. de Boë* or *Sylvius*, Flemish anatomist],—cerebral aqueduct, aqueduct of the midbrain, or iter, connecting third and fourth ventricle; meso-coele.

**aqueous** (ă'kwēūs) *a.* [L. *aqua*, water.] Watery, *appl.* humour, fluid occupying space between lens and cornea; *appl.* tissue consisting of thin-walled watery parenchymatous cells.

**arachnactis** (ărăknăk'tis) *n.* [Gk. *arachne*, spider; *aktis*, ray.]

Larval stage of cerianthid Zoantharia.

**arachnid** (ărăk'nîd) *a.* [Gk. *arachne*, spider.] Spider-like; *pert.* spiders.

**arachnidium** (ărăknîd'îūm) *n.* [Gk. *arachne*, spider; *idion*, *dim.*] The spinning apparatus of a spider, including spinning-glands and spinnerets.

**arachnoid** (ărăk'noid) *a.* [Gk. *arachne*, spider, cobweb; *eidōs*, form.] *Pert.* or resembling a spider; like a cobweb; consisting of fine entangled hairs; *appl.* the thin membrane between dura and pia mater. *n.* The arachnoid membrane.

**arachnoideal** (ărăknoid'ēăl) *a.* [Gk. *arachne*, cobweb; *eidōs*, form.] *Pert.* the arachnoid; *appl.* granulations: Pacchionian bodies, *q.v.*

**arbacioid**,—see diadematoid.

**arborescent** (ăr'bōrēs'ēnt) *a.* [L. *arborescens*, growing like a tree.] Branched like a tree.

**arborisation** (ăr'bōrîză'shūn) *n.* [L. *arbor*, tree.] Tree-like branching, as of nerve cell processes; arborescence.

**arboroid** (ăr'bōroid) *a.* [L. *arbor*, tree; Gk. *eidōs*, like.] Tree-like, designating general structure of a protozoan colony; dendritic.

**arbor vitae** (ăr'bōr vî'tē) *n.* [L. *arbor*, tree; *vita*, life.] The tree of life, *appl.* arborescent appearance of cerebellum in section.

**arbuscle** (ăr'būsł) *n.* [L. *arbuscula*, shrub.] A tree-like small shrub, or a dwarf tree; a branched haustorium, as in certain fungi; arbuscula.

**arbuscular** (ăr'būs'kūlăr) *a.* [L. *arbuscula*, shrub.] Resembling a tree-like small shrub.

**arcade** (ărăkăd') *n.* [L. *arcus*, arch.] An arched channel or passage; a bony arch, as supra- and infra-temporal arches in skull; transverse canal connecting lateral canals, in *Ascaris*.

**Archaeon** (ărăkē'ăn) *a.* [Gk. *archaios*, ancient.] *Appl.* geological era before Palaeozoic; Pre-Cambrian.

**archaeocytes** (âr'kēōsīts) *n. plu.* [Gk. *archaios*, primitive; *kytos*, hollow.] Cells arising from undifferentiated blastomeres and ultimately giving rise to germ-cells and gametes.

**archaeostomatous** (âr'kēōstōm'ātūs) *a.* [Gk. *archaios*, primitive; *stoma*, mouth.] Having the blastopore persistent and forming mouth.

**Archaeozoic** (âr'kēōzō'ik) *a.* [Gk. *archaios*, ancient; *zoe*, life.] *Pert.* earliest geological era, age of unicellular life.

**arch-centra** (âr'ch'sên'trā) *n. plu.* [L. *arcus*, bow; *centrum*, centre.] Centra formed by fusion of basal growths of primary arcualia external to chordal sheath; *cf.* chordacentra.

**archebiosis** (âr'kēbiō'sīs) *n.* [Gk. *arche*, beginning; *biosis*, living.] The origin of life; archeogenesis.

**archedictyon** (âr'kēdik'tiōn) *n.* [Gk. *arche*, beginning; *diktyon*, net.] An intervein network in wings of some primitive insects.

**archegoniophore** (âr'kēgō'niōfōr) *n.* [Gk. *arche*, beginning; *gonos*, offspring; *pherein*, to bear.] Branches of bryophytes, or parts of fern prothalli, bearing archegonia.

**archegonium** (âr'kēgō'niūm) *n.* [Gk. *arche*, beginning; *gonos*, offspring.] A female gametangium in which oospheres are formed, and in which the young plant begins development.

**archencephalon** (âr'k'ēnkēf'ālōn, -sēf-) *n.* [Gk. *arche*, beginning; *engkephalos*, brain.] The primitive forebrain or cerebrum.

**archenteron** (âr'kēn'tērōn) *n.* [Gk. *arche*, beginning; *enteron*, gut.] The cavity of gastrula which forms primitive gut of embryo.

**archo-**, **archaeo-**.

**archespor** (âr'kēspōr) *n.* [Gk. *arche*, beginning; *sporos*, seed.] The tetrahedral or meristematic cell of a sporangium; cell of an archesporium.

**archesporium** (âr'kēspō'rīūm) *n.* [Gk. *arche*, beginning; *sporos*,

seed.] A cell or mass of cells, dividing to form spore mother-cells, or, in liverworts, spore mother-cells and elater-forming cells.

**archetype**,—architype, *q.v.*

**archiamphiaster** (âr'klām'fiās'tēr) *n.* [Gk. *archi*, first; *amphi*, on both sides; *aster*, star.] The amphiaster forming first or second polar body in maturation of ovum.

**archibenthic** (âr'kibēn'thik) *a.* [Gk. *archi*, first; *benthos*, depths of sea.] *Pert.* bottom of sea from edge of continental shelf to upper limit of abyssobenthic zone, at depths of *ca.* 200 to 1000 metres.

**archiblast** (âr'kiblāst) *n.* [Gk. *archi*, first; *blastos*, bud.] Egg protoplasm.

**archiblastic** (âr'kiblās'tik) *a.* [Gk. *archi*, first; *blastos*, bud.] Having total and equal segmentation.

**archiblastula** (âr'kiblās'tulā) *n.* [Gk. *archi*, first; *blastos*, bud.] Typical hollow ball of cells derived from an egg with total and equal segmentation.

**archicarp** (âr'kikārp) *n.* [Gk. *archi*, first; *karpōs*, fruit.] Spirally coiled region of thallus, or stalk bearing oogonium, of certain fungi.

**archicerebrum** (âr'kisēr'ēbrūm) *n.* [Gk. *archi*, first; L. *cerebrum*, brain.] The primitive brain, as the supra-oesophageal ganglia of higher invertebrates; primary brain of arthropods.

**archichlamydeous** (âr'kiklāmīd'eūs) *a.* [Gk. *archi*, first; *chlamys*, cloak.] Having no petals, or having petals entirely separate from one another.

**archicoel** (âr'kisēl) *n.* [Gk. *archi*, first; *koilos*, hollow.] The primary body-cavity or space between alimentary canal and ectoderm in development of various animals.

**archidictyon**,—*see* archedictyon.

**archigenesis** (âr'kijēn'ēsīs) *n.* [Gk. *archi*, first; *genesis*, descent.] Abiogenesis, *q.v.*

**archigony** (âr'kig'ōnī) *n.* [Gk. *archi*, first; *gonos*, begetting.] The first origin of life.



**archinephric** (âr'kiněf'rîk) *a.* [Gk. *archi*, first; *nephros*, kidney.] *Appl.* duct into which pronephric tubules open; *pert.* archinephros.

**archinephridium** (âr'kiněfrîd'îum) *n.* [Gk. *archi*, first; *nephros*, kidney; *idion*, *dim.*] Excretory organ of certain larval invertebrates; solenocyte, *q.v.*

**archinephros** (âr'kiněf'rôs) *n.* [Gk. *archi*, first; *nephros*, kidney.] The primitive kidney; Wolffian body.

**archipallium** (âr'kîpâl'îum) *n.* [Gk. *archi*, first; *L. pallium*, mantle.] The olfactory region of cerebral hemispheres, comprising olfactory bulbs and tubercles, pyriform lobes, hippocampus, and fornix. *Opp.* neopallium.

**archiplasm** (âr'kîplâzm) *n.* [Gk. *archi*, first; *plasma*, mould.] The substance of attraction-sphere, astral rays, and spindle-fibres; also archoplasm; kinoplasm; idiosome, *q.v.*

**archipterygium** (âr'kîterîj'îum) *n.* [Gk. *archi*, first; *pterygion*, little wing.] Type of fin in which skeleton consists of elongated segmented central axis and two rows of jointed rays.

**architomy** (âr'kît'ômî) *n.* [Gk. *archi*, first; *tome*, cutting.] Reproduction by fission with subsequent regeneration, in certain annelids; *opp.* paratomy.

**architype** (âr'kîtîp) *n.* [Gk. *archi*, first; *typos*, type.] An original type from which others may be derived.

**archoplasm**,—archiplasm, *q.v.*

**arcicentrous** (âr'sîsēn'trūs) *a.* [*L. arcus*, bow; *centrum*, centre.] *Appl.* vertebral column in which centra are mainly derived from arch tissue; arcocentrous.

**arciferous** (ârsîf'ērūs) *a.* [*L. arcus*, bow; *ferre*, to carry.] *Appl.* pectoral arch of toads, etc., where precoracoid and coracoid are separated and connected by arched epicoracoid.

**arciform** (âr'sîfôr'm) *a.* [*L. arcus*, bow; *forma*, shape.] Shaped like an arch or bow; arcuate.

**arcocentrous** (âr'kôsēn'trūs) *a.* [*L. arcus*, bow; *centrum*, centre.] *Appl.* vertebral column with inconspicuous chordal sheath and centra derived from arch tissue.

**arcocentrum** (âr'kôsēn'trûm) *n.* [*L. arcus*, bow; *centrum*, centre.] A centrum formed from parts of neural and haemal arches.

**Arctogaea** (âr'k'tôjē'ā, -gā'yā) *n.* [Gk. *Arktos*, Great Bear; *gaia*, earth.] Zoogeographical area comprising Holarctic, Ethiopian, and Oriental regions.

**arcualia** (âr'kūā'liā) *n. plu.* [*L. arcus*, bow.] Small cartilaginous pieces, dorsal and ventral, fused or free, on vertebral column of fishes.

**arcuate** (âr'kūāt) *a.* [*L. arcus*, bow.] Curved or shaped like a bow.

**arculus** (âr'kūlūs) *n.* [*Dim.* of *L. arcus*, bow.] Arc formed by two wing veins of certain insects.

**ardellae** (ârdēl'ē) *n. plu.* [Gk. *ardein*, to sprinkle.] Small apothecia of certain lichens, having appearance of dust.

**area** (ā'rēā) *n.* [*L. area*, ground-space.] A surface, as area opaca, area pellucida, area vasculosa, etc.; part enclosed by a raised ridge, as in Polyzoa; a region.

**arenaceous** (ārēnā'shūs) *a.* [*L. arena*, sand.] Having properties or appearance of sand; sandy; growing in sand.

**arenicolous** (ārēnik'ölūs) *a.* [*L. arena*, sand; *colere*, to inhabit.] Living in sand; psammophilous.

**areola** (ārē'olā) *n.* [*L. areola*, *dim.* of *arca*, space.] A small coloured circle round a nipple; part of iris bordering pupil of eye; one of small spaces or interstices of a special kind of tissue; area defined by cracks on surface of lichens; poroids when surrounded by thickened margins; scrobicula, *q.v.*

**areolar** (ārē'olār) *a.* [*L. areola*, small space.] Of or like an areola; *pert.* an areola.

**areolate** (ārē'olāt) *a.* [*L. areola*, small space.] Divided into small areas defined by cracks or other margins.

**areolation** (är'ëölä'shün) *n.* [L. *areola*, small space.] Areolar pattern or network appearance, as of cell margins in tissue.

**areole** (är'ëöl) *n.* [L. *areola*, small space.] Areola, *q.v.*; space occupied by a group of hairs or spines, as in *Cactus*.

**argentaffin** (ärjën'täfin) *a.* [L. *argentum*, silver; *affinis*, related.] Staining with silver salts, *appl.* cells; argyrophil.

**argenteal** (ärjën'tëäl) *a.* [L. *argenteus*, silvern.] *Appl.* layer of eye containing calcic crystals.

**argenteous** (ärjën'tëüs) *a.* [L. *argenteus*, silvern.] Like silver.

**argenteum** (ärjën'tëüm) *n.* [L. *argenteus*, silvern.] A dermal reflecting tissue layer of iridocytes, without chromatophores, in fishes.

**arginase** (är'jinäs) *n.*—a liver enzyme acting on the amino-acid arginine ( $C_6H_{14}O_2N_4$ ), urea and ornithine being separated by hydrolysis.

**argyrophil** (är'jiröfil) *a.* [Gk. *argyros*, silver; *philos*, loving.] Staining with silver salts, *appl.* fibres of reticular tissue; argentaffin; argentophil, *appl.* basal bodies or blepharoplasts.

**aril** (är'il) *n.* [F. *arille*, Sp. *arillo*, a small hoop.] An additional integument formed on some seeds after fertilisation.

**arillode** (är'ilöd) *n.* [F. *arille*, hoop; Gk. *eidōs*, like.] A false arillus arising from region of micropyle as an expansion of exostome.

**arillus** (äril'üs) *n.* [L. *arillus*, aril.] An aril, *q.v.*

**arista** (äris'tä) *n.* [L. *arista*, awn.] Awn; long-pointed process as in many grasses; a bristle borne by antenna of many brachycerous Diptera.

**aristate** (äris'tät) *a.* [L. *arista*, awn.] Provided with awns, or with a well-developed bristle; *appl.* insect antenna.

**aristogenesis** (är'istöjën'ësis) *n.* [Gk. *aristos*, best; *genesis*, descent.] Process of evolving new biomechanism from the germ plasm; creative

principle or potentiality in origin of species.

**aristogenic**,—eugenic, *q.v.*

**Aristotle's lantern**,—masticating apparatus of sea-urchin.

**arkyochrome** (är'kiökröm) *a.* [Gk. *arkys*, net; *chroma*, colour.] With Nissl granules arranged like network; *appl.* certain neurones.

**armature** (är'mätür) *n.* [L. *armatura*, armour.] Anything which serves to defend, as hairs, prickles, thorns, spines, stings, etc.

**arolium** (ärö'liüm) *n.* [Gk. *arole*, protection.] Median lobe or pad on praetarsus of many insects.

**aromorph** (ä'römôr) *n.* [Gk. *airein*, to raise; *morphe*, form.] A character or structure resulting from aromorphosis.

**aromorphosis** (ä'römôr'fösis) *n.* [Gk. *airein*, to raise; *morphosis*, shaping.] Evolutionary change towards an increase in life energy, *e.g.* evolution of a biting mouth skeleton from gill arches; *opp.* evolution of a merely adaptational character.

**array** (ärä') *n.* [F. *arroi*, retinue.] Arrangement in order of magnitude.

**arrect** (ärëkt') *a.* [L. *arrectus*, set upright.] Upright; erect.

**arrectores pilorum**,—bundles of non-striped muscular fibres associated with hair follicles,—contraction causing hair to stand on end. *Sing.* arrector pili.

**arrhenogenic** (ärën'öjën'ik) *a.* [Gk. *arrhen*, male; *genos*, offspring.] Producing offspring preponderantly or entirely male.

**arrhenoid** (ärën'oid) *a.* [Gk. *arrhen*, male; *eidōs*, form.] Exhibiting male characteristics, as genetically female animals undergoing sex-reversal.

**arrhenoplasm** (ärën'öpläzm) *n.* [Gk. *arrhen*, male; *plasma*, mould.] Male plasm, in reference to theory that all protoplasm consists of arrhenoplasm and thelyplasm.

**arrhenotoky** (ärënöt'öki) *n.* [Gk. *arrhen*, male; *tokos*, birth.] Parthenogenetic production of males.

**arrhostia** (ärösti'ä) *n.* [Gk. *arrhostia*, ill health.] A normal condition or trend in development or evolution which resembles a diseased condition, e.g. extreme size in certain extinct vertebrates resembling overaction of pituitary gland.

**artefact** (är'tëfäkt) *n.* [L. *ars*, art; *factus*, made.] An appearance, or apparent structure, due to preparation and not natural.

**artenkreis** (är'tënkris) *n.* [Ger. *Art*, species; *Kreis*, circle.] Complex of species which replace one another geographically; super-species.

**arterial** (ärtë'riäl) *a.* [L. *arteria*, artery.] *Pert.* an artery, or system of channels by which blood issues to body from heart.

**arteriole** (ärtë'riöl) *n.* [L. *arteriola*, small artery.] A small artery.

**artery** (är'tëri) *n.* [L. *arteria*, artery.] A vessel which conveys blood from heart to body.

**arthritic** (ärthrit'ik) *a.* [Gk. *arthron*, joint.] *Pert.* or at joints.

**arthrobranchiae** (är'thröbräng'kië) *n. plu.* [Gk. *arthron*, joint; *branchia*, gills.] Joint-gills, arising at junction of thoracic appendage with trunk, of Arthropoda.

**arthrodia** (ärthrö'diä) *n.* [Gk. *arthron*, joint.] A joint admitting of only gliding movements.

**arthrodial** (ärthrö'diäl) *a.* [Gk. *arthron*, joint.] *Appl.* articular membranes connecting thoracic appendages with trunk, as in arthropods.

**arthrogenous** (ärthröj'ënüs) *a.* [Gk. *arthron*, joint; *genos*, descent.] Formed as a separate joint, as spores; developed from separated portions of a plant.

**arthromere** (är'thrömër) *n.* [Gk. *arthron*, joint; *meros*, part.] An arthropod body-segment or somite.

**arthropod** (är'thröpöd) *a.* [Gk. *arthron*, joint; *pous*, foot.] With jointed legs; *pert.* phylum including Crustacea, Myriopoda, Insecta, Arachnoidea.

**arthropterous** (är'thröp'tërüs) *a.* [Gk.

*arthron*, joint; *pleron*, wing.] Having jointed fin-rays, as fishes.

**arthrospore** (ärth'röspör) *n.* [Gk. *arthron*, joint; *sporos*, seed.] A resting moniliform bacterial cell; a cell formed by segmentation of a hypha.

**arthrosterigmata** (är'thröstërig'mätä) *n. plu.* [Gk. *arthron*, joint; *sterigma*, support.] Jointed sterigmata.

**arthrostracous** (ärthrös'träküs) *a.* [Gk. *arthron*, joint; *ostrakon*, shell.] Having a segmented shell.

**arthrotergal** (är'thrötër'gäl) *a.* [Gk. *arthron*, joint; L. *tergum*, back.] *Appl.* median dorsal flexor of opisthosoma in Limulus.

**articular** (ärtik'ülär) *a.* [L. *articulus*, joint.] *Pert.* or situated at a joint; *appl.* cartilage, lamellae, surface, capsule, etc.

**articularis** *genus*, — subcrural muscle.

**articulated** (ärtik'ülätëd) *a.* [L. *articulus*, joint.] Jointed; articulate; separating easily at certain points.

**articulation** (är'tikülä'shün) *n.* [L. *articulus*, joint.] A joint between bones or segments, or between segments of a stem.

**artifact**,—*artefact, q.v.*

**artiodactyl** (är'tiödäk'til) *a.* [Gk. *artios*, even; *daktylos*, finger.] Having an even number of digits.

**arytaenoid** (är'të'noid) *a.* [Gk. *arytaina*, ladle; *eidos*, form.] Pitcher-like; *appl.* two cartilages at back of larynx, also glands, muscles, etc.

**asci**,—*plu.* of ascus.

**ascidian** (äsíd'iäl) *a.* [Gk. *askidion*, dim. of *askos*, bag.] Sac-like; *appl.* certain specialised, or abnormal, floral and foliage leaves; *pert.* ascidium.

**ascidian** (äsíd'iän) *a.* [Gk. *askidion*, little bag.] Like an ascidian or sea-squirt.

**ascidium** (äsíd'iüm) *n.* [Gk. *askidion*, little bag.] A pitcher-leaf, as in Nepenthes.

**ascigerous** (äsij'ërüs) *a.* [Gk. *askos*, bag; L. *gerere*, to bear.] Bearing asci, as certain hyphae in fungi; asciferous.

**ascocarp** (äs'køkârp) *n.* [Gk. *askos*, bag; *karpós*, fruit.] Asci with their protective covering; sporocarp of Ascomycetes.

**ascogenous** (äsköj'ënüs) *n.* [Gk. *askos*, bag; *-genes*, producing.] Producing asci; *appl.* hyphae, cells.

**ascogonium** (äs'kögö'niüm) *n.* [Gk. *askos*, bag; *gonos*, offspring.] A specialised hyphal branch which gives rise to ascogenous hyphae or an ascus; oogonium of Ascomycetes.

**ascoma** (äs'kömâ) *n.* [Gk. *askoma*, leather padding.] Disc-shaped ascocarp in certain fungi.

**ascophore** (äs'koför) *n.* [Gk. *askos*, bag; *pherein*, to bear.] Ascocarp.

**ascorbic acid**,—pure vitamin C, deficiency of which in diet causes dental disorders and scurvy; hexuronic acid,  $C_6H_8O_6$ .

**ascospore** (äs'köspör) *n.* [Gk. *askos*, bag; *sporos*, seed.] One of the spores produced in an ascus.

**ascus** (äs'küs) *n.* [Gk. *askos*, bag.] A membranous spore-sac, as of Ascomycetes.

**asemic** (äsē'mik) *a.* [Gk. *asemos*, without sign.] Without markings.

**aseptate** (äsēp'tât) *a.* [L. *a*, not; *septum*, partition.] Without any septum.

**asexual** (äsëk'süäl) *a.* [Gk. *a*, without; L. *sexus*, sex.] Having no apparent sexual organs; parthenogenetic or vegetative, as *appl.* reproduction.

**asiphonate** (äsī'fönât) *a.* [L. *a*, not; *sipho*, tube.] *Appl.* larvae whose respiratory tubes open directly to exterior.

**asparagine** (äspär'äjën, -gîn) *n.* [Gk. *asparagos*, asparagus.] A compound, first detected in asparagus, formed from amino-acids in leguminous and other seeds, of importance in nitrogen metabolism of plants;  $C_4H_8O_3N_2$ .

**aspect** (äs'pëkt) *n.* [L. *aspicere*, to

look toward.] Direction facing part of a surface; appearance or look; seasonal appearance.

**aspection** (äspëk'shün) *n.* [L. *aspicere*, to look toward.] Seasonal succession of phytological and zoological phenomena.

**asperity** (äspër'iti) *n.* [L. *asper*, rough.] Roughness, as on a leaf.

**asplanchnic** (äsplängk'nîk) *a.* [Gk. *a*, without; *splangchna*, viscera.] Without alimentary canal.

**asporocystid** (äspö'rös's'tid) *a.* [Gk. *a*, not; *sporos*, seed; *kystis*, bladder; *idion*, *dim.*] *Appl.* oocyst of Sporozoa when zygote divides into sporozoites without sporocyst formation.

**asporous** (äspö'rüs) *a.* [Gk. *a*, without; *sporos*, seed.] Having no spores.

**assimilation** (äslm'ilä'shün) *n.* [L. *ad*, to; *similis*, like.] Conversion into protoplasm of ingested and digested nutrient material; anabolism.

**association** (äsö'siä'shün) *n.* [L. *ad*, to; *socius*, fellow.] A plant community forming a division of a formation or larger unit of vegetation, as of tundra, grassland, forest, and characterised by dominant species; adherence of gregarines without fusion of nuclei; *appl.* fibres connecting white matter of interior of brain with cortex; *appl.* neurons with intersegmental axons.

**associes** (äsö'siēz) *n.* [L. *ad*, to; *socius*, fellow.] An association representing a stage in the process of succession.

**astacene** (äs'täsën) *n.* [L. *astacus*, crayfish.] Carotenoid pigment of certain crustaceans, echinoderms, and fishes; astacin;  $C_{40}H_{48}O_4$ .

**astaxanthin** (äs'täzän'thin) *n.* [L. *astacus*, crayfish; Gk. *xanthos*, yellow.] An animal carotenoid derived from ingested plant carotenoids, in chromoplasts of certain flagellates, also combining with proteins to form pigments, as of crustaceans;  $C_{40}H_{52}O_4$ .

**astelic** (ästä'lik) *a.* [Gk. *a*, without; *stèle*, pillar.] Not possessing a stèle.

**astely** (ästhē'li) *n.* [Gk. *a*, without; *stèle*, pillar.] Absence of a central cylinder, axis, or stele.

**aster** (äs'tēr) *n.* [Gk. *aster*, star.] The star-shaped achromatic structure surrounding centrosome during mitosis; star-shaped arrangement of chromosomes during mitosis.

**asterion** (ästhē'riōn) *n.* [Gk. *aster*, star.] The region of posterolateral fontanelle where lambdoid, parieto-mastoid, and occipito-mastoid sutures meet.

**asteriscus** (äs'tēris'kūs) *n.* [Gk. *asteriskos*, *dim.* of *aster*, star.] A small otolith in rudimentary cochlea of teleosts.

**asternal** (ästhēr'nāl) *a.* [L. *a*, from; *sternum*, breastplate.] *Appl.* ribs whose ventral ends do not join the sternum directly.

**asteroid** (äs'tēroid) *a.* [Gk. *aster*, star; *eidōs*, form.] Star-shaped; *pert.* star-fish.

**asterospondylous** (äs'tērōspōn'dilūs) *a.* [Gk. *aster*, star; *sphondylos*, vertebra.] Having centrum with radiating calcified cartilage; also asterospondylic.

**asthenic** (ästhēn'ik) *a.* [Gk. *asthenos*, feeble.] Weak; tall and slender; leptosome.

**astogeny** (ästhōj'ēni) *n.* [Gk. *astos*, citizen; *genos*, descent.] The development of a colony by budding.

**astomatous** (ästhōm'ätūs) *a.* [Gk. *a*, without; *stoma*, mouth.] Not having a mouth; without epidermic pores or stomata.

**astomous** (äs'tōmūs) *a.* [Gk. *a*, without; *stoma*, mouth.] Without a stomium or line of dehiscence; bursting irregularly.

**astragalus** (ästräg'älūs) *n.* [Gk. *astragalos*, ankle-bone.] The talus, second largest tarsal bone in man; a tarsal bone in vertebrates.

**astroblast** (äs'trōbläst) *n.* [Gk. *aster*, star; *blastos*, bud.] A cell giving rise to protoplasmic or to fibrillar astrocytes.

**astrocentre** (äs'trōsēn'tēr) *n.* [L. *aster*, star; *centrum*, centre.] Centrosome.

**astrocyte** (äs'trōsīt) *n.* [Gk. *aster*, star; *kytos*, hollow.] A common neuroglia cell; astroglia; macroglia; Deiters' cell; a neuroglial cell with branching protoplasmic processes in grey matter; a fibrillar or spider cell in white matter.

**astropodia** (äs'trōpō'diā) *n. plu.* [Gk. *aster*, star; *pous*, foot.] Fine unbranched radiating pseudopodia, as in Heliozoa and some Radiolaria.

**astropyle** (äs'trōpīl, -pī'lē) *n.* [Gk. *aster*, star; *pyle*, gate.] Chief aperture of central capsule, in certain Radiolaria.

**astrosclereid** (äs'trōsklē'rēid) *n.* [Gk. *aster*, star; *skleros*, hard; *eidōs*, form.] A multiradiate sclereid or stone cell; a spiculate or ophiroid cell.

**astrosphere** (äs'trōsfēr) *n.* [Gk. *aster*, star; *sphaira*, ball.] Central mass of aster without rays; aster exclusive of centrosome; astral sphere.

**asymmetrical** (äsimēt'rikāl) *a.* [Gk. *asymmetros*, disproportionate.] *Pert.* want of symmetry; having two sides unlike or disproportionate; *appl.* structures or organs which cannot be divided into similar halves by any plane; asymmetric.

**asynapsis** (äsinäp'sis) *n.* [Gk. *a*, not; *synapsis*, union.] Absence of pairing of chromosomes in meiosis; asyndesis.

**atactostele** (ätäk'töstē'lē) *n.* [Gk. *ataktos*, irregular; *stèle*, post.] A complex stele having bundles scattered in the ground tissue, as in monocotyledons.

**atavism** (ät'avīzm) *n.* [L. *atavus*, ancestor.] Reversion, occurrence of an ancestral characteristic not observed in more immediate progenitors.

**atavistic** (ät'avīs'tik) *a.* [L. *atavus*, ancestor.] *Pert.*, marked by, or tending to atavism.

**ateleosis** (ätēlēō'sis) *n.* [Gk. *ateles*, imperfect.] Dwarfism where individual is a miniature adult; *cf.* achondroplasia.

**atelia** (ätēl'fā) *n.* [Gk. *ateles*, ineffectual.] The apparent uselessness of a character of unknown biological significance; incomplete development.

**atelomitic** (ätēlōmīt'ik) *a.* [Gk. *a*, not; *telos*, end; *mitos*, thread.] *Appl.* other than terminal attachment of chromosome to spindle.

**athalamous** (āthāl'amūs) *a.* [Gk. *a*, without; *thalamos*, inner room.] Lacking a thalamus.

**athrocytosis** (āth'rōsitō'sis) *n.* [Gk. *athroos*, collected; *kytos*, hollow.] The capacity of cells to selectively absorb and retain solid particles in suspension, as dyes.

**atlanto-occipital**,—occipito-atlantal, *q.v.*

**atlas** (āt'lās) *n.* [Gk. *Atlas*, a Titan.] The first cervical vertebra.

**atokous** (āt'ökūs) *a.* [Gk. *atokos*, childless.] Without offspring.

**atoll** (āt'öl, ätöl') *n.* [Mal. *atoll*.] A coral reef surrounding a central lagoon.

**atopy** (āt'öpī) *n.* [Gk. *atopia*, unusual nature.] Idiosyncrasy, genetic sensitivity to poisonous effects of particular antigens or atopens, as of certain proteins, pollen, etc.

**atretic** (ātrē'tik) *a.* [Gk. *a*, not; *tretos*, perforated.] *Appl.* vesicles resulting from degeneration of Graafian follicles, spurious corpora lutea.

**atrial** (ā'triāl) *a.* [L. *atrium*, central room.] *Pert.* atrium; *appl.* cavity, pore, canal, siphon, lobes.

**atrichic** (ātrik'ik) *a.* [Gk. *a*, not; *thrix*, hair.] Having no flagella; atrichous.

**atriocoelomic** (ā'trīōsēlōm'ik) *a.* [L. *atrium*, central room; Gk. *koiloma*, a hollow.] Connecting atrium and coelom; *appl.* funnels, of uncertain function, in Cephalochorda.

**atriopore** (ā'trīōpōr) *n.* [L. *atrium*, central room; *porus*, channel.] The opening from atrial cavity to

exterior in Cephalochorda; spiracle in tadpole.

**atrioventricular** (ā'trīōvēntrik'ülär) *a.* [L. *atrium*, chamber; *ventriculus*, small cavity.] *Pert.* atrium and ventricle of heart; *appl.* bundle, groove, node, openings.

**atrium** (ā'trīüm) *n.* [L. *atrium*, chamber.] Anterior cavity of heart; tympanic cavity; a division of the vestibule at end of bronchiole; chamber surrounding pharynx in Tunicata and Cephalochorda.

**atrochal** (āt'rökäl) *a.* [Gk. *a*, without; *trochos*, wheel.] Without preoral cirlet of cilia; *appl.* trochophore when preoral cirlet is absent and surface is uniformly ciliated.

**atropal**,—atropous.

**atrophy** (āt'rōfi) *n.* [Gk. *a*, without; *trophe*, nourishment.] Emaciation; diminution in size and function.

**atropous** (āt'röpūs) *a.* [Gk. *a*, without; *trophe*, turn.] *Appl.* ovule in proper position, *i.e.* not inverted.

**attachment**, the spindle attachment; a lasting fusion of two chromosomes.

**attenuated** (ätēn'üätēd) *a.* [L. *attenuare*, to thin.] Thinned; reduced in density, strength, or pathogenic activity.

**atterminal** (ättēr'mīnāl) *a.* [L. *ad*, to; *terminus*, end.] Towards a terminal; *appl.* current directed toward thermal cross-section.

**attic** (āt'ik) *n.* [Gk. *attikos*, Athenian.] The epitympanic recess.

**attraction-particle**,—centriole, *q.v.*

**attraction - sphere**,—centrosphere, *q.v.*

**auditory** (öd'itōrī) *a.* [L. *audire*, to hear.] *Pert.* hearing apparatus, *appl.* organ, nucleus, ossicle, capsule, canal, meatus, nerve, vesicle, etc.; *pert.* sense of hearing.

**Auerbach's plexus** [L. *Auerbach*, German anatomist]. A gangliated plexus of non-medullated nerve-fibres, found between the circular and longitudinal layers of muscular coat of small intestine; plexus myentericus.

**augmentation** (ögmēntā'shun) *n.* [L. *augere*, to increase.] Increase in number of whorls; *cf.* choris.

**augmentor** (ôgmên'tôr) *a.* [L. *augere*, to increase.] *Appl.* nerves rising from sympathetic system and acting on heart, with antagonistic relation to vagi; accelerator.

**aulophyte** (ôl'ôfit) *n.* [Gk. *aulon*, hollow way; *phyton*, plant.] A non-parasitic plant growing in hollow of another.

**aulostomatous** (ôl'östôm'âtüs) *a.* [Gk. *aulos*, tube; *stoma*, mouth.] Having a tubular mouth or snout.

**aural** (ôr'äl) *a.* [L. *auris*, ear.] *Pert.* ear or hearing.

**auricle** (ôr'ïkl) *n.* [L. *auricula*, small ear.] Any ear-like lobed appendage; the external ear; atrium or anterior chamber of heart.

**auricula** (ôrïk'ülä) *n.* [L. *auricula*, small ear.] An auricle.

**auricular** (ôrïk'ülär) *n.* [L. *auricula*, small ear.] Ear covert of birds. *a. Pert.* an auricle; *appl.* artery, nerve, tubercle, vein.

**auricularia** (ôrïk'ülä'riä) *n.* [L. *auricula*, small ear.] A type of larva found among Holothuria.

**auricularis** (ôrïk'ülä'rïs) *n.* [L. *auricula*, earlap.] Superior, anterior, posterior, extrinsic muscles of the external ear.

**auriculate** (ôrïk'ülät) *a.* [L. *auricula*, small ear.] Eared; *appl.* leaf with expanded bases surrounding stem; *appl.* leaf with lobes separate from rest of blade; hastate-auricled.

**auriculo-ventricular**,—*pert.* or connecting auricle and ventricle of heart; *appl.* bundle, valve.

**auriform** (ôr'rïfôrm) *a.* [L. *auris*, ear; *forma*, shape.] Resembling the external ear in shape, as shell of *Haliotis*.

**aurophore** (ôr'ôfôr) *n.* [L. *auris*, ear; Gk. *pherein*, to bear.] An organ projecting from base of pneumatophore of certain Siphonophora.

**austral** (ôs'träl) *a.* [L. *australis*, southern.] *Appl.* or *pert.* southern biogeographical region, or restricted to North America between transitional and tropical zones.

**Australian** (ôsträ'liän) *a.* [L. *australis*, southern.] *Appl.* or *pert.* a zoogeographical region including Papua, Australia, New Zealand, and Pacific islands.

**autacoid** (ôt'âkoid) *n.* [Gk. *autos*, self; *akos*, remedy; *eidōs*, form.] Internal secretion, a hormone or a chalone.

**autarticular** (ôt'ärtik'ülär) *n.* [Gk. *autos*, self; L. *articulus*, joint.] Gonial, *q.v.*

**autecology** (ôt'êköl'ôjt) *n.* [Gk. *autos*, self; *oikos*, household; *logos*, discourse.] The biological relations between a single species and its environment; ecology of an individual organism; auto-ecology.

**autobiology**,—idiobiology, *q.v.*

**autoblast** (ôt'ôbläst) *n.* [Gk. *autos*, self; *blastos*, bud.] An independent micro-organism or cell.

**autocarp** (ôt'ökârp) *n.* [Gk. *autos*, self; *karpos*, fruit.] Fruit resulting from self-fertilisation.

**autocatalysis** (ôt'ökätäl'ïsls) *n.* [Gk. *autos*, self; *kata*, down; *lysis*, loosening.] Dissolution or reaction of a cell or substance due to influence of a product or secretion of its own.

**autochthon** (ôtök'thôn) *n.* [Gk. *autos*, self; *chthon*, the ground.] An indigenous species.

**autochthonous** (ôtök'thönüs) *a.* [Gk. *autos*, self; *chthon*, ground.] Aboriginal; indigenous; inherited or hereditary, native, *appl.* characteristics; originating within an organ, as pulsation of excised heart; formed where found. *Opp.* allochthonous.

**autocoid**,—autacoid, *q.v.*

**autocyst** (ôt'ôsist) *n.* [Gk. *autos*, self; *kystis*, bladder.] A thick membrane formed by Neosporidia separating them from host tissues.

**autodermalia** (ôt'ödërmä'llä) *n. plu.* [Gk. *autos*, self; *derma*, skin.] Dermal spicules with axial cross, within dermal membrane.

**autodont** (ôt'ödönt) *a.* [Gk. *autos*, self; *odous*, tooth.] Designating or *pert.* teeth not directly attached to jaws, as in cartilaginous fishes.

**autoecious** (ôtě'siūs) *a.* [Gk. *autos*, self; *oikos*, house.] Passing different stages of life history in the same host; *appl.* parasitic fungi; autoxenous.

**autogamous** (ôtôg'âmūs) *a.* [Gk. *autos*, self; *gamos*, marriage.] Self-fertilising, *opp.* allogamous.

**autogamy** (ôtôg'āmī) *n.* [Gk. *autos*, self; *gamos*, marriage.] Self-fertilisation, *opp.* allogamy; conjugation of nuclei within a single cell; conjugation of two protozoa originating from division of the same individual.

**autogenesis** (ôt'ôjēn'ēsīs) *n.* [Gk. *autos*, self; *genesis*, birth.] Spontaneous generation; autogeny, autogony.

**autogenetic** (ôt'ôjēnēt'ik) *a.* [Gk. *autos*, self; *genesis*, birth.] Reproducing spontaneously, as body-cells.

**autogenic** (ôtôjēn'ik) *a.* [Gk. *autos*, self; *gennaîn*, to produce.] Caused by reactions of organisms themselves; *appl.* plant successions, *opp.* allogenic; autonomic or spontaneous, *appl.* movements.

**autogenous** (ôtôj'ēnūs) *a.* [Gk. *autos*, self; *-genes*, producing.] Produced in the same organism; *appl.* enzymes; *appl.* graft reimplanted in same animal; *appl.* vaccine injected into same animal; *appl.* variations due to changes within chromosomes.

**autogony** (ôtôg'ônī) *n.* [Gk. *autos*, self; *gonos*, offspring.] Autogenesis, *q.v.*

**autoheteroploid** (ô'tôhēt'ērôploid) *n.* [Gk. *autos*, self; *heteros*, other; *aploos*, onefold; *eidos*, form.] Heteroploid derived from a single genome or multiplication of some of its chromosomes.

**autoinfection** (ôt'ôinfēk'shūn) *n.* [Gk. *autos*, self; L. *inficere*, to taint.] Reinfection from host's own parasites.

**autointoxication** (ôt'ôintôk'sikā'shūn) *n.* [Gk. *autos*, self; L. *in*, in; Gk. *toxikon*, poison.] Reabsorption of toxic substances produced by the body.

**autolysis** (ôtôl'īsis) *n.* [Gk. *autos*,

self; *lysis*, loosing.] Self-digestion; cell or tissue disintegration by action of autogenous enzymes.

**autolytic** (ôt'ôlīt'ik) *a.* [Gk. *autos*, self; *lysis*, loosing.] Causing or *pert.* autolysis; *appl.* enzymes.

**automixis** (ôt'ômik'sis) *n.* [Gk. *autos*, self; *mixis*, mingling.] The union, in a cell, of chromatin derived from common parentage; self-fertilisation.

**autonarcosis** (ôt'ônârkô'sis) *n.* [Gk. *autos*, self; *narke*, numbness.] State of being poisoned, rendered dormant, or arrested in growth, owing to self-produced carbon dioxide.

**autonomic** (ôt'ônôm'ik) *a.* [Gk. *autos*, self; *nomos*, law.] Autonomus; self-governing, spontaneous; *appl.* the involuntary nervous system as a whole, comprising parasympathetic and sympathetic systems; induced by internal stimuli, as movements of development, growth, unfolding, etc., *opp.* paratonic; internal, *appl.* environment, *opp.* choronomic.

**autopalatine** (ôt'ôpāl'ātin) *n.* [Gk. *autos*, self; L. *palatum*, palate.] In a few teleosts, an ossification at anterior end of pterygoquadrate.

**autoparasite** (ô'tôpâr'asīt) *n.* [Gk. *autos*, self; *parasitos*, one who subsists on another.] A parasite growing on another parasite.

**autoparthenogenesis** (ôt'ôpâr'thēnôjēn'ēsīs) *n.* [Gk. *autos*, self; *parthenos*, virgin; *genesis*, descent.] Development from unfertilised eggs activated by a chemical or physical stimulus.

**autophagous** (ôtôf'ägūs) *a.* [Gk. *autos*, self; *phagein*, to eat.] *Appl.* birds capable of running about and securing food for themselves when newly hatched.

**autophilous** (ôtôf'ilūs) *a.* [Gk. *autos*, self; *philein*, to love.] Self-pollinating; autogamous.

**autophya** (ôt'ôfi'ā) *n. plu.* [Gk. *autos*, self; *phyein*, to produce.] Elements in formation of shell secreted by animal itself; *cf.* xenophya.



**autophyllogeny** (ôt'ôfil'ôj'ënì) *n.* [Gk. *autos*, self; *phyllon*, leaf; *genos*, birth.] Growth of one leaf upon or out of another.

**autophyte** (ôt'ôfit) *n.* [Gk. *autos*, self; *phyton*, plant.] A self-nourished plant; plant nourished directly by inorganic matter; *cf.* saprophyte.

**autophytic** (ôt'ôfit'ik) *a.* [Gk. *autos*, self; *phyton*, plant.] Autotrophic, *q.v.*; *pert.* autophytes.

**autoplasma** (ôt'ôpláz'mă) *n.* [Gk. *autos*, self; *plasma*, mould.] Plasma from same animal used as medium for tissue culture; *cf.* homoplasma, heteroplasma.

**autoplastic** (ôt'ôplás'tik) *a.* [Gk. *autos*, self; *plastos*, formed.] *Appl.* graft to another position in the same individual.

**autopodium** (ôt'ôpô'diüm) *n.* [Gk. *autos*, self; *pous*, foot.] The hand or foot.

**autopolyploid** (ôt'tôpôl'iploid) *n.* [Gk. *autos*, self; *polys*, many; *aploos*, onefold; *eidos*, form.] An organism having more than two sets of homologous chromosomes.

**autopotamic** (ôt'tôpôtăm'ik) *a.* [Gk. *autos*, self; *potamos*, river.] Thriving in a stream, not in its backwaters; *appl.* potamoplankton.

**autoradiography** (ôt'tôrádiôg'răfi) *n.* [Gk. *autos*, self; L. *radius*, ray; Gk. *graphein*, to write.] Method of demonstrating the presence of specific chemical substances by first making them radioactive, then recording on a photographic film their distribution in the body, organs, or tissues.

**autoskeleton** (ôt'ôskêl'ëtôn) *n.* [Gk. *autos*, self; *skeletos*, dried.] A true skeleton formed within the animal.

**autosome** (ôt'ôsôm) *n.* [Gk. *autos*, self; *soma*, body.] A typical chromosome, or euchromosome; *opp.* sex-chromosome; *cf.* allosome.

**autospore** (ôt'tôspôr) *n.* [Gk. *autos*, self; *sporos*, seed.] An aplanospore which resembles the parent cell.

**autostoses** (ôt'ôstô'sêz) *n. plu.* [Gk. *autos*, self; *osteon*, bone.] Bones formed in cartilage; *cf.* allostoses.

**autostylic** (ôt'ôstil'ik) *a.* [Gk. *autos*, self; *stylos*, pillar.] With mandibular arch self-supporting, articulating directly with skull; *cf.* hyostylic.

**autosynapsis** (ôt'tôsînap'sis) *n.* [Gk. *autos*, self; *synapsis*, union.] Autosynsidesis.

**autosynsidesis** (ôt'tôsîndêsîs) *n.* [Gk. *autos*, self; *synsidesis*, a binding together.] Pairing of chromosomes from the same parent, in a polyploid or allopolyploid; pairing of homogenetic chromosomes; *cf.* allosynsidesis.

**autotilly** (ôt'tôtil'i) *n.* [Gk. *autos*, self; *tillêsthai*, to pluck.] Autotomy, as in certain spiders.

**autotomy** (ôtôt'ômi) *n.* [Gk. *autos*, self; *tome*, cutting.] Self-amputation of a part, as in certain worms, arthropods, and lizards.

**autotransplantation**, — transplantation of tissue or organ to another part of same organism; *cf.* homoio-transplantation.

**autotrophic** (ôt'ôtrôf'ik) *a.* [Gk. *autos*, self; *trephein*, to nourish.] Procuring food independently; *appl.* plants which form carbohydrates and proteins from carbon dioxide and inorganic compounds; neither saprophytic nor parasitic; autophytic. *Opp.* heterotrophic.

**autotropism** (ôtôt'rôpîzm) *n.* [Gk. *autos*, self; *trope*, turn.] Tendency to grow in a straight line; *appl.* plants unaffected by external influence; tendency of organs to resume original form, after bending or straightening due to external factors; rectipetality.

**autoxenous** (ôt'ôzên'üs) *a.* [Gk. *autos*, self; *xenos*, host.] Parasitic on the same host at different stages in life-history; autoecious.

**autozoid** (ôt'ôzô'oid) *n.* [Gk. *autos*, self; *zoon*, animal; *eidos*, form.] An independent alcyonarian zoid or individual.

**auxenolonic acid**,—auxin B, *q.v.*

**auxentriolic acid**,—auxin A, *q.v.*

**auxesis** (òksē'sis) *n.* [Gk. *auxesis*, growth.] Growth; increase in size owing to increase in cell size; induction of cell division; *cf.* merisis.

**auxetic** (òksēt'ík) *n.* [Gk. *auxein*, to increase.] Any agent which induces cell-division. *a.* Stimulating cell proliferation.

**auxilia** (ògzil'yā) *n. plu.* [L. *auxilium*, assistance.] Two small sclerites between unguitractor and claws, in insects.

**auxiliary cells**,—two or more cells adjoining guard cells, or surrounding stomata; accessory or subsidiary cells.

**auximone** (òk'simōn) *n.* [Gk. *auximos*, promoting growth.] An accessory growth-stimulating factor in food of plants.

**auxins** (òk'sinz) *n. plu.* [Gk. *auxein*, to increase.] Growth-regulating hormones of plants; auxin A isolated from growing tips of oat seedlings and human urine,  $C_{18}H_{32}O_6$ ; auxin B, from vegetable sources and urine, accelerates mycelium growth,  $C_{18}H_{30}O_4$ ; hetero-auxin (*q.v.*), and a number of other substances.

**auxocyte** (òks'òsīt) *n.* [Gk. *auxein*, to increase; *kytos*, hollow.] Androcyte, sporocyte, oocyte, or spermatocyte at growth period.

**auxospireme** (òks'òspī'rēm) *n.* [Gk. *auxein*, to increase; *speirema*, coil.] Spireme formed after syngesis.

**auxospore** (òk'sòspōr) *n.* [Gk. *auxein*, to increase; *sporos*, seed.] Zygote of diatoms, formed by union of two individuals at limit of decrease in size.

**auxotonic** (òk'sòtōn'ík) *a.* [Gk. *auxein*, to increase; *tonos*, strain.] Induced by growth; *appl.* movements of immature plants; *cf.* allastotonic; *appl.* contraction against an increasing resistance.

**avicularium** (àvikulā'rīum) *n.* [L. *avicula*, *dim.* of *avis*, bird.] In Polyzoa a modified zoecium with

muscular movable attachments resembling a bird's beak.

**avifauna** (ā'vifō'na) *n.* [L. *avis*, bird; *Faunus*, rural deity.] All the bird species or birds of a region or period; ornith.

**avitaminosis** (āvī'tāminō'sis) *n.* [L. *a*, from; *vita*, life; *ammoniacum*, resinous gum.] A condition or disease resulting from vitamin-deficiency.

**awn** (ōn) *n.* [Icel. *ōgn*, chaff.] The 'beard' of grasses; point of leaf, in certain Lycopsidea.

**axial** (āk'siāl) *a.* [L. *axis*, axle.] *Pert.* axis or stem.

**axial filament**,—central filament, as of a stiff radiating pseudopodium or of a flagellum.

**axial sinus**,—a nearly vertical canal in echinoderms, opening into internal division of oral ring sinus, and communicating with stone canal.

**axial skeleton**,—skeleton of head and trunk, *opp.* appendicular skeleton.

**axiate pattern**,—arrangement of parts with reference to a definite axis.

**axil** (āk'sil) *n.* [L. *axilla*, arm-pit.] The angle between leaf or branch and axis from which it springs.

**axile** [āk'sil] *a.* [L. *axis*, axle.] *Pert.*, situated in, or belonging to the axis; *appl.* placentation, free central, *q.v.*

**axilemma** (āk'silēm'ā) *n.* [L. *axis*, axle; Gk. *lemma*, husk.] In medullated nerve fibres, the sheath surrounding axial cylinder.

**axilla** (āksil'ā, āk'silā) *n.* [L. *axilla*, arm-pit.] The arm-pit; an axil.

**axillary** (āk'silāri, āksil'āri) *a.* [L. *axilla*, arm-pit.] *Pert.* axil; growing in axil, as buds; *pert.* arm-pit; *appl.* seventh longitudinal or anal vein of insect wing. *n.* One of the pteralia, *q.v.*

**axinost**,—axonost, *q.v.*

**axipetal** (āksip'ētāl) *a.* [L. *axis*, axle; *petere*, to seek.] Passing towards attachment of axon, *appl.* nerve impulses.

**axis** (äk'sis) *n.* [L. *axis*, axle.] The main stem or central cylinder; the fundamentally central line of a structure; rachis of trilobites; epistropheus, *q.v.*; structure at base of insect wing.

**axis cylinder**,—the central tract of a nerve fibre, the impulse transmitter; axon and its myelin sheath.

**axodendritic** (äk'södëndrit'ik) *a.* [Gk. *axon*, axle; *dendron*, tree.] *Appl.* synapse in which end-brush of axon is in contact with dendritic processes.

**axon** (äk'sôn) *n.* [Gk. *axon*, axle.] The axis-cylinder process of a nerve-cell normally transmitting excitations from its cell body; axone, neuraxon, neurite.

**axon hill** or **hillock**,—cone of origin, *q.v.*

**axoneme** (äk'sônēm) *n.* [Gk. *axon*, axle; *nema*, thread.] A thread of strand forming infusorian stalk; an axostyle; the axial filament of a flagellum; axial thread or genome of a chromosome.

**axonost** (äk'sônöst) *n.* [Gk. *axon*, axle; *osteon*, bone.] The basal portion of rods supporting dermotrichia of fin-rays; axinost; inter-spinal.

**axoplast** (äk'söpläst) *n.* [Gk. *axon*, axle; *plastos*, formed.] A filament extending from kinetoplast to end of body in some trypanosomes.

**axopodium** (äk'söpö'diüm) *n.* [Gk. *axon*, axle; *pous*, foot.] A pseudopodium with axial filament.

**axosomatic** (äk'sösömät'ik) *a.* [Gk. *axon*, axle; *soma*, body.] *Appl.* synapse in which end-brush of axon terminates about nerve-cell body.

**axospermous** (äk'söspër'müs) *a.* [Gk. *axon*, axle; *sperma*, seed.] With axile placentation.

**axostyle** (äk'söstil) *n.* [Gk. *axon*, axle; *stylos*, pillar.] A slender flexible rod of organic substance forming a supporting axis for the body of many Flagellata.

**azoic** (äzö'ik) *a.* [Gk. *a*, without; *zoikos*, *pert.* life.] Uninhabited; without remains of organisms or

of their products; *appl.* Pre-Cambrian era or rocks.

**azurophil** (äzü'röfil, äzh'üröfil) *a.* [F. *azur*, from Ar. *al azurd*, lapis lazuli; Gk. *philein*, to love.] Staining readily with blue aniline dyes.

**azygobranchiate** (äz'igöbräng'kiät) *a.* [Gk. *a*, without; *zygon*, yoke; *branchia*, gills.] Having gills or ctenidia not developed on one side.

**azygoid** (äz'igoid) *a.* [Gk. *a*, without; *zygon*, yoke; *eidos*, form.] Not zygoid; haploid; *appl.* parthenogenesis.

**azygomatous** (äzigöm'ätüs) *a.* [Gk. *a*, without; *zygoma*, a bar.] Without a zygoma or cheek-bone arch.

**azygomelous** (äz'igöml'üs, *a.* [Gk. *a*, without; *zygon*, yoke; *melos*, limb.] Having unpaired appendages; *appl.* fin of Acrania and Cyclostomata.

**azygos** (äzi'gös) *n.* [Gk. *a*, without; *zygon*, yoke.] An unpaired muscle, artery, vein, process.

**azygosperm** (äz'igöspërm), **azygospore** (äz'igöspör) *n.* [Gk. *a*, without; *zygon*, yoke; *sperma*, *sporos*, seed.] A spore developed directly from a gamete without conjugation; parthenospore.

**azygote** (äzi'göt) *n.* [Gk. *a*, without; *zygon*, yoke.] An organism resulting from haploid parthenogenesis.

**azygous** (äz'igüs) *a.* [Gk. *a*, without; *zygon*, yoke.] Unpaired.

## B

**Babes-Ernst bodies**,—metachromatic or volutin granules, in bacteria.

**bacca** (bäk'ä) *n.* [L. *bacca*, berry.] A pulpy fruit; berry.

**baccate** (bäk'ät) *a.* [L. *bacca*, berry.] Pulpy, fleshy; berried.

**bacciferous** (bäksif'ërüs) *a.* [L. *bacca*, berry; *ferre*, to bear.] Berry-producing, or -bearing.

**bacciform** (bäk'siförm) *a.* [L. *bacca*, berry; *forma*, shape.] Berry-shaped.

**bacillary** (bäsil'äri) *a.* [L. *bacillum*, small staff.] *Appl.* layer of rods and cones of retina.

**bacillus** (bäs'il'ūs) *n.* [L. *bacillum*, small staff.] A rod-like bacterium; a single-celled fungus.

**back-cross**,—to mate a cross or hybrid to a member of one of the parental stocks; a resulting hybrid.

**back mutation**,—reversion of a mutant gene to its original state; reverse mutation.

**bactericidin** (bäk'tëris'din) *n.* [Gk. *bakterion*, small rod; L. *caedere*, to kill.] A substance that kills bacteria without causing lysis.

**bacteriochlorin** (bäktë'rïöklö'rïn) *n.* [Gk. *bakterion*, small rod; *chloros*, green.] Green pigment, related to chlorophyll, in sulphur bacteria.

**bacteriochlorophyll** (bäktë'rïöklö'rïöfil) *n.* [Gk. *bakterion*, small rod; *chloros*, green; *phyllon*, leaf.] A photosynthetic pigment of bacteria, from which chlorophyll-*a* may be derived; bacteriochlorin.

**bacteriology** (bäk'tëriöl'öji) *n.* [Gk. *bakterion*, small rod; *logos*, discourse.] The science dealing with bacteria.

**bacteriolysin** (bäktë'rïöli'sin) *n.* [Gk. *bakterion*, small rod; *lysis*, loosing.] A substance which causes dissolution of bacteria.

**bacteriolysis** (bäktë'rïöli'sis) *n.* [Gk. *bakterion*, small rod; *lysis*, loosing.] The disintegration and dissolution of bacteria.

**bacteriophage** (bäktë'rïöfä'j) *n.* [Gk. *bakterion*, small rod; *phagein*, to devour.] A destroyer of bacteria; a bacteriolytic agent; phage.

**bacteriopurpurin** (bäktë'rïöpür'-pürin) *n.* [Gk. *bakterion*, small rod; L. *purpura*, purple.] A complex of photosynthetic pigments causing the red, purple, or violet appearance of certain bacteria.

**bacteriostatic** (bäktë'rïöstät'ik) *a.* [Gk. *bakterion*, small rod; *statikos*, causing to stand.] Inhibiting development of bacteria.

**bacteriotropin** (bäk'tëriö'tröp'in) *n.* [Gk. *bakterion*, small rod; *trope*, turn.] An ingredient of blood serum which renders bacteria more readily phagocytatable; opsonin.

**bacteroid** (bäk'tëroid) *n.* [Gk. *bakterion*, small rod; *eidos*, form.] An irregular form of certain bacteria.

**baculiform** (bäk'üliförm) *a.* [L. *baculum*, rod; *forma*, shape.] Rod-shaped; *appl.* chromosomes; *appl.* ascospores.

**baculum** (bäk'ülüm) *n.* [L. *baculum*, rod.] The penis bone; os priapi.

**Baillarger's line** [*J. F. G. Baillarger*, French neurologist]. Outer and inner layer of white fibres parallel to surface of cerebral cortex.

**balanced lethals**,—heterozygotes in which different lethal genes are in such close proximity on a pair of homologous chromosomes that there is usually no crossing-over.

**balancers** (bäl'änsërz) *n. plu.* [L. *bilanx*, having two scales.] Halteres or poisers of Diptera; paired larval head appendages functioning as props until forelegs are developed in certain salamanders.

**balanoid** (bäl'änoid) *a.* [Gk. *balanos*, acorn; *eidos*, like.] *Pert.* barnacles; acorn-shaped.

**balanus** (bäl'änüs) *n.* [L. *balanus*, acorn.] Glans penis; a genus of barnacles.

**balausta** (bälös'tä) *n.* [Gk. *balaustion*, blossom.] A many-celled, many-seeded, indehiscent fruit with tough pericarp; fruit of pomegranate.

**baleen** (bälën') *n.* [L. *balaena*, whale.] Horny plates attached to upper jaw of true whales; whalebone.

**ballast** (bäl'äst) *n.* [Sw. *barlast*.] *Appl.* elements present in plants and which are not apparently essential for growth, *e.g.*, Al, Si.

**ballistospores** (bälis'töspörz) *n. plu.* [Gk. *ballein*, to throw; *sporos*, seed.] Asexual spores, formed on sterigmata and suddenly discharged with excretion of droplet, in Sporobolomycetes.

**balsamiferous** (bäl'sämif'erüs) *a.* [L. *balsamum*, balsam; *ferre*, to bear.] Producing balsam.

**bar of Sanio**,—crassula, *q.v.*

**baraesthesia** (băr'ěsthě'ziă) *n.* [Gk. *baros*, weight; *aisthesis*, sensation.] The sensation of pressure.

**barb** (bârb) *n.* [L. *barba*, beard.] One of delicate thread-like structures extending obliquely from a feather rachis, and forming the vane; a hooked hair-like bristle.

**barbate** (bâr'bât) *a.* [L. *barbatus*, bearded.] Bearded; having hair tufts.

**barbel** (bâr'běl) *n.* [L. *barbellus*, barbel.] A tactile process arising from the head of various fishes.

**barbellate** (bârběl'ât, bârb'ělât) *a.* [L. *barba*, beard.] With stiff hooked hair-like bristles; *appl.* pappus.

**barbicel** (bâr'bisěl) *n.* [L. *barba*, beard.] Small process on a feather barbule.

**barbula** (bâr'bülă) *n.* [L. *barbula*, *dim.* of *barba*, beard.] Row of teeth in peristome of certain mosses.

**barbule** (bâr'bül) *n.* [L. *barbula*, *dim.* of *barba*, beard.] One of small hooked processes fringing barbs of feather; appendage of lower jaw in some teleosts.

**bark** (bârk) *n.* [Dan. *bark*.] The tissues external to the vascular cambium, collectively; phloem, cortex, and periderm; outer dead tissues and cork.

**barotaxis** (bărötăk'sis) *n.* [Gk. *baros*, weight; *taxis*, arrangement.] The reaction to a pressure stimulus.

**Bartholin's duct** [C. *Bartholin*, jr., Danish anatomist]. The larger duct of the sublingual gland.

**Bartholin's glands**,—the greater vestibular glands on each side of vagina, homologues of male bulbourethral glands.

**basal** (bă'săl) *a.* [L. *basis*, base.] *Pert.*, at, or near the base.

**basal bone**,—os basale, basale, *q.v.*

**basal ganglia**,—ganglia connecting cerebrum with other centres.

**basal granule**,—a thickening, or body, at base of a flagellum in certain protozoa.

**basal knobs**,—swellings or granules at points of emergence of cilia in ciliated epithelial cells.

**basal leaf**,—one of the leaves produced near base of stem.

**basal metabolic rate**,—rate of metabolism of a resting organism, expressed as percentage of normal heat production per hour per square metre surface area.

**basal metabolism**,—standard metabolism, tissue activity or physicochemical changes of a resting organism.

**basal placenta**,—arises from proximal end of ovary.

**basal plates**,—certain plates in echinoderms, situated at or near top of stalk in crinoids, in echinoids forming part of apical disc; fused parachordal plates in skull development; of placenta, outer wall of intervillous space.

**basal wall**,—the first plane of division of oospores of ferns and mosses.

**basalar** (băsă'lăr) *a.* [L. *basis*, base; *ala*, wing.] *Appl.* sclerites below wing base in insects.

**basale** (băsă'lē) *n.* [L. *basis*, base.] A bone of variable structure arising from fusion of pterygiophores and supporting fish fins; os basale, the fused basioccipital and parasphenoid in Gymnophiona.

**basement membrane**,—the membrane of a gland containing acini or special secreting portions.

**baseost** (bă'sěöst) *n.* [Gk. *basis*, base; *osteon*, bone.] Distal element of pterygiophore of teleosts.

**basialveolar** (bă'siăl'věölăr) *a.* [L. *basis*, base; *alveolus*, small pit.] Extending from basion to centre of alveolar arch.

**basibranchial** (bă'sibrăng'kiăl) *n.* [Gk. *basis*, base; *branchia*, gills.] Median ventral or basal skeletal portion of branchial arch.

**basic** (bă'sik) *a.* [Gk. *basis*, base.] *Appl.* stains which act in general on nuclear contents of cell; *cf.* acidic; *appl.* number, the minimum haploid chromosome number occurring in a series of euploid species of a genus; chromosome number in gametes of diploid ancestor of a polyploid organism.

**basichromatin** (bā'sikrō'mätin) *n.* [Gk. *basis*, base; *chroma*, colour.]

The deeply staining substance of nuclear network; chromatin.

**basiconic** (bā'sikōn'ik) *a.* [Gk. *basis*, base; *konos*, cone.] Having, or consisting of, a conical process above general surface; *appl.* sensillae.

**basicoxite** (bā'sikōks'it) *n.* [L. *basis*, base; *coxa*, hip.] Basal ring of coxa.

**basicranial** (bā'sikrā'nīāl) *a.* [Gk. *basis*, base; *krānion*, skull.] Situated at or relating to base of skull.

**basidia**,—*plu.* of basidium.

**basidial** (bāsid'īāl) *a.* [Gk. *basis*, base; *idion*, *dim.*] *Pert.* basidia or a basidium.

**basidiocarp** (bāsid'īōkār) *n.* [Gk. *basis*, base; *idion*, *dim.*; *karpōs*, fruit.] The fruit-body of Basidiomycetes.

**basidiophore** (bāsid'īōfōr) *n.* [Gk. *basis*, base; *idion*, *dim.*; *pherein*, to bear.] A sporophore which carries basidia.

**basidiospore** (bāsid'īōspōr) *n.* [Gk. *basis*, base; *idion*, *dim.*; *sporos*, seed.] A spore or gonidium abstracted from a basidium; a secondary conidium; a basidio-gonidium.

**basidium** (bāsid'īūm) *n.* [Gk. *basis*, base; *idion*, *dim.*] A special cell or row of cells, of certain fungi, forming spores by abstriction.

**basidorsal** (bā'sidōr'sāl) *a.* [L. *basis*, base; *dorsum*, back.] *Appl.* small cartilaginous neural plate.

**basifixed** (bā'sifiks) *a.* [L. *basis*, base; *figere*, to make fast.] Attached by base; innate, having filament attached to anther base.

**basifugal** (bā'sifūgāl) *a.* [L. *basis*, base; *fugere*, to flee.] Growing away from base.

**basifuge** (bā'sifū) *n.* [L. *basis*, base; *fugere*, to flee.] A plant unable to tolerate basic soils; calcifuge. *a.* Oxyphilous.

**basigamous** (bāsig'āmūs) *a.* [Gk. *basis*, base; *gamos*, marriage.]

Having oosphere reversed in embryo-sac.

**basigynium**,—podogynium, *q.v.*

**basihyal** (bā'sihī'āl) *n.* [Gk. *basis*, base; *hyoeides*, Y-shaped.] Broad median plate, the basal or median ventral portion of hyoid arch.

**basilabium** (bā'silā'bīūm) *n.* [L. *basis*, base; *labium*, lip.] Sclerite formed by fusion of labiostipites in insects.

**basilar** (bās'īlār) *a.* [L. *basis*, base.] *Pert.* near or growing from base; as artery, crest, membrane, plexus, plate, process, style.

**basilic** (bās'il'ik) *a.* [Gk. *basilikos*, royal.] *Appl.* a large vein on inner side of biceps of arm.

**basilingual** (bā'siling'gwāl) *a.* [L. *basis*, base; *lingua*, tongue.] *Appl.* a broad cartilaginous plate, the body of the hyoid, in crocodiles, turtles, and amphibians.

**basimandibula** (bā'simāndīb'ūlā) *n.* [L. *basis*, base; *mandibulum*, lower jaw.] A small sclerite, on insect head, at base of mandible.

**basimaxilla** (bā'simāksil'ā) *n.* [L. *basis*, base; *maxilla*, upper jaw.] A sclerite at base of maxilla in insects.

**basioccipital** (bā'siōksip'ītāl) *n.* [L. *basis*, base; *occiput*, back of head.] The median basilar bone or element in occipital region of skull.

**basion** (bā'siōn) *n.* [Gk. *basis*, base.] The middle of anterior margin of foramen magnum.

**basioophthalmite** (bā'siōfthāl'mit) *n.* [Gk. *basis*, base; *ophthalmos*, eye.] The proximal joint of eye-stalk in crustaceans.

**basiotic** (bā'siōt'ik) *a.* [Gk. *basis*, base; *ous*, ear.] Mesotic, *q.v.*

**basipetal** (bā'sip'ētāl) *a.* [L. *basis*, base; *petere*, to seek.] Developing from apex to base; *appl.* leaves and inflorescences.

**basipharynx** (bā'sifār'ingks) *n.* [Gk. *basis*, base; *pharynx*, gullet.] In insects, epipharynx and hypopharynx united.

**basiphil** (bā'sifīl) *a.* [Gk. *basis*, base; *philein*, to love.] Basophil, *q.v.* *n.* A basiphil cell; a mast cell, *q.v.*

**basipodite** (bāsīp'ōdīt) *n.* [Gk. *basis*, base; *pous*, foot.] The second or distal joint of the protopodite of certain limbs of Crustacea; trochanter of spiders.

**basipodium** (bā'sīpō'diūm) *n.* [Gk. *basis*, base; *pous*, foot.] Wrist or ankle.

**basiproboscis** (bā'sīprōbōs'is) *n.* [Gk. *basis*, base; *proboskis*, trunk.] Membranous portion of proboscis of some insects, consisting of mentum, submentum, and maxillary cardines and stipites.

**basipterygium** (bā'sitērij'iūm) *n.* [Gk. *basis*, base; *pterygion*, little wing.] A large flat triangular bone in pelvic fin of teleosts, and a bone or cartilage in other fishes.

**basipterygoid** (bā'sitērij'igoid) *n.* [Gk. *basis*, base; *pteryx*, wing; *eidos*, form.] A process of the basisphenoid in some birds.

**basiscopic** (bā'siskōp'ik) *a.* [Gk. *basis*, base; *skochein*, to view.] Facing towards the base; *opp.* acroscopic.

**basisphenoid** (bā'sisfē'noid) *n.* [Gk. *basis*, base; *sphen*, wedge; *eidos*, form.] Cranial bone between basioccipital and presphenoid.

**basisternum** (bā'sistēr'nūm) *n.* [L. *basis*, base; *sternum*, breast-bone.] The principal sclerite of insect sternum; antesternite, eusternum.

**basistyle** (bā'sistil) *n.* [Gk. *basis*, base; *stylos*, pillar.] Proximal part or coxite of gonostyle in mosquitoes; *cf.* dististyle.

**basitarsus** (bā'sitār'sūs) *n.* [Gk. *basis*, base; *tarsos*, sole of foot.] Proximal tarsomere or 'metatarsus' of spiders. *Cf.* telotarsus.

**basitemporal** (bā'sitēm'pōrāl) *n.* [L. *basis*, base; *tempora*, temples.] A broad membrane bone covering basisphenoidal region of skull.

**basitonic** (bā'sitōn'ik) *a.* [Gk. *basis*, base; *tonos*, brace.] Having anther united at its base with rostellum; basitonous. *Opp.* acrotonic.

**basivertebral** (bā'sivēr'tēbrāl) *a.* [L. *basis*, base; *vertebra*, vertebra.] *Appl.* veins within bodies of verte-

brae and communicating with vertebral plexuses.

**basket cells**,—myo-epithelial cells surrounding glandular cells; cerebellar cortical cells with axon branches surrounding Purkinje cells.

**basophil** (bā'sōfil) *a.* [Gk. *basis*, base; *philein*, to love.] Having a strong affinity for basic stains; also basiphil, basiphilic, basophile, basophilic, basophilous. *n.* A cell which stains with basic dyes.

**bast** (bāst) *n.* [A.S. *baest*, bast.] The inner fibrous bark of certain trees; liber.

**bastard merogony**,—activation of an enucleated egg fragment by spermatozoon of a different species.

**bastard wing**,—the alula or ala spuria, consisting of three quill feathers borne on first digit of bird's wing.

**bathylimnetic** (bāth'ilimnēt'ik) *a.* [Gk. *bathys*, deep; *limnetes*, living in marshes.] Living or growing in the depths of lakes or marshes.

**bathymetric** (bāth'imēt'rīk) *a.* [Gk. *bathys*, deep; *metron*, measure.] *Pert.* vertical distribution of organisms in space.

**bathypelagic** (bāth'ipēlāj'ik) *a.* [Gk. *bathys*, deep; *pelagos*, sea.] *Pert.*, or inhabiting, the deep sea.

**bathysmal** (bāthiz'māl) *a.* [Gk. *bathys*, deep.] *Pert.* deepest depths of the sea.

**batonette** (bātōnēt) *n.* [F. *bâtonnet*, small stick.] An element of the Golgi apparatus, *q.v.*

**batrachian** (bātrā'kiān) *a.* [Gk. *batrachos*, frog.] Relating to frogs and toads.

**B-cells**,—beta cells of islets of Langerhans.

**B-chromosome**, — supernumerary chromosome in maize.

**B-complex**,—a group of accessory food factors comprising thiamine or vitamin B<sub>1</sub>, riboflavin (B<sub>2</sub>), pantothenic acid (B<sub>3</sub>), niacin or P-P factor, pyridoxin (B<sub>6</sub>), biotin (H), inositol, choline, para-amino benzoic acid, and folic acid (M), and B<sub>12</sub> anti-pernicious-anaemia factor.

**bdelloid** (dēl'oid) *a.* [Gk. *bdella*, leech; *eidos*, form.] Having the appearance of a leech.

**beard** (bērd) *n.* [A. S. *beard*, beard.] Any of the arrangements of hairs which resemble a man's beard, on heads of animals; barbed or bristly hair-like outgrowths on grain; awn.

**bedeguar** (bēd'ēgār) *n.* [From Persian through F. *bédegvar*, thistle.] A mossy gall formed on rose-bushes.

**behaviorism** (bēhāv'vīōrizm) *n.* [A. S. *behabban*, to hold in.] Theory that the manner in which animals act may be explained in terms of conditioned neuromotor and glandular reactions.

**belemnoid** (bēl'ēmnoīd, bēlēm'noid) *a.* [Gk. *belemnion*, dart; *eidos*, form.] Shaped like a dart; *appl.* styloid process.

**Bellini's ducts** [*L. Bellini*, Italian anatomist]. Tubes opening at apex of kidney papilla, and formed by union of smaller straight or collecting tubules.

**bell nucleus**,—a solid mass of cells, derived from ectoderm and lying between ordinary ectoderm and mesogloea at apex of medusoid bud.

**belonoid** (bēl'ōnoīd) *a.* [Gk. *belone*, needle; *eidos*, form.] Shaped like a needle; styloid.

**benthic** (bēn'thīk) *a.* [Gk. *benthos*, depths of sea.] *Pert.*, or living on, sea-bottom; benthal.

**benthopotamous** (bēn'thōpōt'āmūs) *a.* [Gk. *benthos*, depths; *potamos*, river.] *Pert.*, growing, or living, on bed of a river or stream.

**benthos** (bēn'thōs) *n.* [Gk. *benthos*, depths of sea.] The fauna and flora of the sea-bottom.

**Berlese's organ** [*A. Berlese*, Italian zoologist]. A glandular organ in haemocoel on right side of female abdomen in Cimeex, secreting during passage of spermatozoa to spermatheca.

**berry** (bēr'ī) *n.* [A. S. *berie*, berry.] Inferior, indehiscent, many-seeded fruit, usually with fleshy pericarp;

egg of lobster, or crayfish; dark knob-like structure on bill of swan.

**beta** (β) *cells*,—basophil cells in pars glandularis of pituitary gland; cells with alcohol-soluble granules, in islets of Langerhans, B cells.

**beta** (β) *granules*,—granules in peripheral region of protoplast, a protein reserve in blue-green algae; cyanophycin.

**betaine** (bē'tāiēn) *n.* [*L. beta*, beet.] A basic decomposition product of lecithin, occurring in beet and other plants, and in animals;  $C_5H_{11}O_2N$ .

**Betz cells** [*V. A. Betz*, Russian histologist]. Giant pyramidal cells in motor area of cerebral cortex.

**B-horizon**,—the lower, illuvial soil layers.

**biacuminate** (bī'ākū'mīnāt) *a.* [*L. bis*, twice; *acumen*, point.] Having two tapering points.

**biarticulate** (bī'ārtīk'ūlāt) *a.* [*L. bis*, twice; *articulus*, joint.] Two-jointed.

**bicapsular** (bīkāp'sūlār) *a.* [*L. bis*, twice; *capsula*, little box.] Having two capsules or vessels.

**bicarinate** (bīkār'īnāt) *a.* [*L. bis*, twice; *carina*, keel.] With two keel-like processes.

**bicarpellate** (bīkār'pēlāt) *a.* [*L. bis*, twice; Gk. *karpos*, fruit.] With two carpels; bicarpellary.

**bicaudate** (bīkō'dāt) *a.* [*L. bis*, twice; *cauda*, tail.] Possessing two tail-like processes.

**bicellular** (bīsēl'ūlār) *a.* [*L. bis*, twice; *cellula*, little cell.] Composed of two cells.

**bicentric** (bī'sēntrīk) *a.* [*L. bis*, twice; *centrum*, centre.] *Pert.* two centres; *appl.* distribution of species, etc., discontinuous owing to alteration in the intervening area.

**biceps** (bī'sēps) *n.* [*L. bis*, twice; *caput*, head.] A muscle with two heads or origins, as biceps brachii and femoris.

**biciliate** (bīsīl'īāt) *a.* [*L. bis*, twice; *cilium*, eyelash.] Furnished with two cilia.



**bicipital** (bīsīp'itāl) *a.* [L. *bis*, twice; *caput*, head.] *Pert.* biceps; *appl.* fascia, or lacertus fibrosus, an aponeurosis of distal tendon of the biceps brachii; a groove, the intertubercular sulcus, on upper part of humerus; ridges, the crests of the greater and lesser tubercles of the humerus; *appl.* a rib with dorsal tuberculum and ventral capitulum.

**bicolateral** (bikōlāt'ērāl) *a.* [L. *bis*, twice; *con*, together; *latus*, side.] Having the two sides similar; *appl.* a vascular bundle with phloem on both sides of xylem, as in Cucurbitaceae and Solanaceae.

**bicolligate** (bikōl'īgāt) *a.* [L. *bis*, twice; *cum*, together; *ligare*, to bind.] With two stretches of webbing on the foot.

**biconjugate** (bikōn'joogāt) *a.* [L. *bis*, twice; *cum*, with; *jugum*, yoke.] With two similar sets of pairs.

**bicornute** (bikōrnūt) *a.* [L. *bis*, twice; *cornutus*, horned.] With two horn-like processes.

**bicostate** (bikōs'tāt) *a.* [L. *bis*, twice; *costa*, rib.] Having two longitudinal ridges or ribs, as a leaf.

**bicrenate** (bikrē'nāt) *a.* [L. *bis*, twice; *crena*, notch.] Doubly crenate, as crenate leaves with notched toothed margins.

**bicuspid** (bikūs'pīd) *a.* [L. *bis*, twice; *cuspis*, point.] Having two cusps or points; *appl.* valve consisting of anterior and posterior cusps attached to circumference of left atrioventricular orifice, mitral valve; *appl.* teeth, premolar.

**bicyclic** (bisīk'lik) *a.* [L. *bis*, twice; Gk. *kyklos*, circle.] Arranged in two whorls.

**Bidder's ganglia** [F. H. Bidder, Estonian anatomist]. A collection of nerve-cells in region of the auriculo-ventricular groove.

**Bidder's organ**,—a rudimentary ovary attached to anterior end of generative organs in the toad.

**bidental** (bīdēn'tāl) *a.* [L. *bis*, twice; *dens*, tooth.] Having two teeth, or tooth-like processes; bidentate.

**bidenticulate** (bī'dēntik'ūlāt) *a.* [L. *bis*, twice; *dim.* of *dens*, tooth.] With two small teeth or tooth-like processes, as some scales.

**biennial** (biēn'iāl) *a.* [L. *bis*, twice; *annus*, year.] Lasting for two years.

**bifacial** (bifā'siāl, bifā'shāl) *a.* [L. *bis*, twice; *facies*, face.] *Appl.* leaves with distinct upper and lower surfaces; dorsiventral.

**bifarious** (bifā'riūs) *a.* [L. *bis*, twice; *fariam*, in rows.] Arranged in two rows, one on each side of axis.

**bifid** (bīf'id) *a.* [L. *bis*, twice; *findere*, to split.] Forked, opening with a median cleft; divided nearly to middle line.

**biflabellate** (bī'flābēl'āt) *a.* [L. *bis*, twice; *flabellum*, fan.] Doubly flabellate, each side of antennal joints sending out flabellate processes.

**biflagellate** (bīflāj'elāt) *a.* [L. *bis*, twice; *flagellum*, whip] Having two flagella.

**biflex** (bī'flēks) *a.* [L. *bis*, twice; *flectere*, to bend.] Twice curved.

**biflorate** (bīflō'rāt) *a.* [L. *bis*, twice; *flos*, flower.] Bearing two flowers.

**bifoliar** (bīfō'liār) *a.* [L. *bis*, twice; *folium*, leaf.] Having two leaves.

**bifoliate** (bīfō'liāt) *a.* [L. *bis*, twice; *folium*, leaf.] *Appl.* palmate compound leaf with two leaflets.

**biforin** (bīf'ōrin) *n.* [L. *bis*, twice; *foris*, door.] An oblong raphidian cell opening at each end.

**biforous** (bīf'ōrūs) *a.* [L. *bis*, twice; *foris*, door.] With two openings; *appl.* spiracles in larvae of certain beetles.

**bifurcate** (bīfūr'kāt) *a.* [L. *bis*, twice; *furca*, fork.] Forked; having two prongs; having two joints, the distal V-shaped and attached by its middle to the proximal.

**bigeminal** (bījēm'ināl) *a.* [L. *bis*, twice; *geminus*, double.] With structures arranged in double pairs; *appl.* arrangement of pore-pairs in two rows, in ambulacra of some echinoids; *cf.* corpora bigemina.

**bigeminate** (bijēm'ināt) *a.* [L. *bis*, twice; *geminus*, double.] Doubly-paired; twin-forked.

**bigeneric** (bi'jēnēr'ik) *a.* [L. *bis*, twice; *genus*, race.] *Appl.* hybrids between two distinct genera.

**bijugate** (bijoo'gāt) *a.* [L. *bis*, twice; *jugare*, to join.] With two pairs of leaflets.

**bilabiate** (bilā'biāt) *a.* [L. *bis*, twice; *labium*, lip.] Two-lipped; *appl.* calyx, corolla, dehiscence.

**bilamellar** (bilāmēl'ār) *a.* [L. *bis*, twice; *lamella*, plate.] Formed of two plates; having two lamellae.

**bilaminar** (bilām'inār) *a.* [L. *bis*, twice; *lamina*, thin plate.] Having two plate-like layers; diploblastic.

**bilateral** (bilāt'erāl) *a.* [L. *bis*, twice; *latus*, side.] Having two sides symmetrical about an axis.

**bile** (bīl) *n.* [L. *bilis*, bile.] The secretion of the liver, passing to duodenum and assisting digestion.

**biliary** (bil'iārī) *a.* [L. *bilis*, bile.] Conveying or *pert.* bile.

**bilicyanin** (bil'isī'ānīn) *n.* [L. *bilis*, bile; Gk. *kyanos*, dark blue.] A blue pigment resulting from oxidation of biliverdin.

**bilipurpurin** (bil'ipūr'pūrīn) *n.* [L. *bilis*, bile; *purpura*, purple.] Phylloerythrin.

**bilirubin** (bil'iroo'bīn) *n.* [L. *bilis*, bile; *ruber*, red.] A reddish-yellow pigment of bile and blood, end-product of hæmoglobin metabolism; so also bilifulvine, biliphaein;  $C_{39}H_{36}N_4O_6$ .

**biliverdin** (bil'ivēr'dīn) *n.* [L. *bilis*, bile; F. *vert*, green.] A green bile pigment formed by oxidation of bilirubin;  $(C_{16}H_{18}N_2O_4)_n$ .

**bilobate** (bilō'bāt) *a.* [L. *bis*, twice; L.L. *lobus*, from Gk. *lobos*, rounded flap.] Having two lobes.

**bilobular** (bilōb'ulār) *a.* [L. *bis*, twice; L. *lobulus*, *dim.* of *lobus*, lobe.] Having two lobules.

**bilocellate** (bi'lōsēl'āt) *a.* [L. *bis*, twice; *locellus*, *dim.* of *locus*, place.] Divided into two compartments.

**bilocular** (bilōk'ulār), **biloculine** (bilōk'ullīn) *a.* [L. *bis*, twice; *locus*, place.] Containing two cavities or chambers; *cf.* *loculus*.

**bilophodont** (bilōf'ōdōnt) *a.* [L. *bis*, twice; Gk. *lophos*, ridge; *odous*, tooth.] *Appl.* molar teeth of tapir, which have ridges joining the two anterior and two posterior cusps.

**bimaculate** (bīmāk'ulāt) *a.* [L. *bis*, twice; *macula*, spot.] Marked with two spots or stains.

**bimanous** (bīm'anūs) *a.* [L. *bis*, twice; *manus*, hand.] Having two hands; *appl.* certain Primates.

**bimastism** (bīmās'tīzm) *n.* [L. *bis*, twice; Gk. *mastos*, breast.] Condition of having two mammae.

**bimuscular** (bīmūs'kulār) *a.* [L. *bis*, twice; *musculus*, muscle.] Having two muscles.

**binary fission**,—division of a cell into two by an apparently simple division of nucleus and cytoplasm.

**binary nomenclature**,—binomial nomenclature, *q.v.*

**binate** (bī'nāt) *a.* [L. *bini*, two by two.] Growing in pairs; *appl.* leaf composed of two leaflets.

**binocular** (bīnōk'ulār) *a.* [L. *bini*, pair; *oculus*, eye.] Having or *pert.* two eyes; stereoscopic, *appl.* vision.

**binodal** (bīnō'dāl) *a.* [L. *bis*, twice; *nodus*, knob.] Having two nodes, as stem of plant.

**binomial** (bīnō'miāl) *a.* [L. *bis*, twice; *nomen*, name.] Consisting of two names; *appl.* nomenclature, the system of double names given to plants and animals,—first generic name, then specific, as *Felis* (genus) *tigris* (species).

**binomialism** (bīnō'miālīzm) *n.* [L. *bis*, twice; *nomen*, name.] The system of binomial nomenclature.

**binovular** (bīnōv'ulār) *a.* [L. *bini*, pair; *ovum*, egg.] *Pert.* two ova; dizygotic; *appl.* twinning.

**binuclear** (bīnū'klēār), **binucleate** (bīnū'klēāt) *a.* [L. *bis*, twice; *nucleus*, small nut.] Having two nuclei.

**bioblast** (bī'ōblāst) *n.* [Gk. *bios*, life ;

*blastos*, bud.] A hypothetical unit, *q.v.*

**biocatalyst** (bī'ōkāt'ālist) *n.* [Gk.

*bios*, life ; *katalysis*, dissolving.] An enzyme ; a ferment.

**biocellate** (bīōs'ēlāt) *a.* [L. *bis*, twice ; *ocellus*, *dim.* of *oculus*, eye.] Having two ocelli.

**biocenosis**,—**biocoenosis**, *q.v.*

**biochemistry** (bī'ōkēm'īstrī) *n.*

[Gk. *bios*, life ; *chemeia*, transmutation.] The chemistry of living organisms.

**biochore** (bī'ōkōr) *n.* [Gk. *bios*, life ; *choris*, separate.] Boundary of a floral or faunal region ; climatic boundary of a floral region ; a group of similar biotopes.

**biochrome** (bī'ōkrōm) *n.* [Gk. *bios*, life ; *chroma*, colour.] Any natural colouring matter of plants and animals ; biological pigment.

**biocoenosis** (bī'ōsēnō'sis) *n.* [Gk. *bios*, life ; *koinos*, common.] A community of organisms inhabiting a biotope ; **biocenosis**.

**biocycle** (bī'ōsikl) *n.* [Gk. *bios*, life ; *kyklos*, place of assembly.] One of the three main divisions of the biosphere : marine, or fresh-water, or terrestrial habitat.

**biodemography** (bīōdēmōg'ράφι) *n.* [Gk. *bios*, life ; *demos*, people ; *graphein*, to write.] Science dealing with the integration of ecology and genetics of populations.

**biodynamics** (bī'ōdīnām'īks) *n.* [Gk. *bios*, life ; *dynamis*, power.] The science of the active vital phenomena of organisms.

**bioecology** (bī'ōēkōl'ōji) *n.* [Gk. *bios*, life ; *oikos*, household ; *logos*, discourse.] Ecology of plants and animals.

**bioelectric** (bī'ōēlēk'trik) *a.* [Gk. *bios*, life ; *elektron*, amber.] *Appl.* currents produced in living organisms.

**bioenergetics** (bī'ōēnērjēt'īks) *n.* [Gk. *bios*, life ; *energeia*, action.] Study of energy transformations in living organisms.

**biogen** (bī'ōjēn), **biogene** (biōjēn) *n.* [Gk. *bios*, life ; *genos*, descent.]

A hypothetical unit, *q.v.* ; a large living molecule.

**biogenesis** (bī'ōjēn'ēsis) *n.* [Gk. *bios*, life ; *genesis*, descent.] The theory of the descent of living matter from living matter—*omne vivum e vivo*. *Opp.* **abiogenesis**.

**biogenetic law**, — recapitulation theory, *q.v.*

**biogenous** (biōj'ēnūs) *a.* [Gk. *bios*, life ; *genos*, offspring.] Inhabiting living organisms, as parasites.

**biogeny** (biōj'ēnī) *n.* [Gk. *bios*, life ; *genesis*, descent.] The science of the evolution of organisms, comprising ontogeny and phylogeny.

**biogeochemistry** (bī'ōjē'ōkēm'īstrī) *n.* [Gk. *bios*, life ; *ge*, earth ; *chemeia*, transmutation.] The study of the distribution and migration of chemical elements present in living organisms and in interaction with their geographical environment.

**biogeography** (bī'ōjēōg'ράφι) *n.* [Gk. *bios*, life ; *ge*, earth ; *graphein*, to write.] The part of biology dealing with the geographical distribution of plants (phytogeography) and animals (zoogeography) ; chorology.

**biological** (biōlōj'īkāl) *a.* [Gk. *bios*, life ; *logos*, discourse.] Relating to the science of life.

**biology** (biōl'ōji) *n.* [Gk. *bios*, life ; *logos*, discourse.] The science of life and living.

**bioluminescence** (bī'ōlūmīnēs'ēns, -loo-) *n.* [Gk. *bios*, life ; L. *luminescere*, to grow light.] Light-production, as in many groups of animals, and in bacteria and fungi.

**biolysis** (biōl'īsls) *n.* [Gk. *bios*, life ; *lysis*, loosing.] The decomposition of organic matter resulting from activity of living organisms ; disintegration of life.

**biomass** (bī'ōmās) *n.* [Gk. *bios*, life ; *massein*, to squeeze.] Total weight of organisms per unit area.

**biome** (biōm) *n.* [Gk. *bios*, life.] A community of living organisms ; a complex of climax communities of plants and animals in a major region, as tundra, forest, grassland, desert.

**biometeorology** (bī'ōmētēōrōl'ōji) *n.* [Gk. *bios*, life; *meteorologia*, treatise on the heavenly bodies.] The study of the effects of atmospheric conditions upon plants and animals.

**biometrics** (bī'ōmēt'riks) *n.* [Gk. *bios*, life; *metron*, measure.] The statistical study of living organisms and their variations; biometry.

**bion** (bī'ōn), **biont** (bī'ōnt) *n.* [Gk. *bion*, living.] An independent living organism; an individual organism.

**bionergy** (bī'ōnērji) *n.* [Gk. *bios*, life; *energeia*, action.] Vital force.

**bionomics** (bī'ōnōm'iks) *n.* [Gk. *bios*, life; *nomos*, law.] The study of organisms in relation to their environment; bionomy; ecology.

**biophore** (bī'ōfōr) *n.* [Gk. *bios*, life; *pherein*, to carry.] A hypothetical unit, *q.v.*

**biophotogenesis** (bī'ōfōtōjēn'ēsis) *n.* [Gk. *bios*, life; *phos*, light; *genesis*, origin.] The production and emission of light by plants or by animals; bioluminescence.

**biophysics** (bī'ōfiz'iks) *n.* [Gk. *bios*, life; *physis*, nature.] Study of biological phenomena interpreted in terms of physical principles; physics as applicable to biology.

**biophyte** (bī'ōfit) *n.* [Gk. *bios*, life; *phyton*, plant.] A plant which gets sustenance from living organisms.

**bioplasm** (bī'ōplāzm) *n.* [Gk. *bios*, life; *plasma*, mould.] Living matter; protoplasm.

**bioplast** (bī'ōplāst) *n.* [Gk. *bios*, life; *plastos*, formed.] A minute quantity of living protoplasm capable of reproducing itself.

**biopsy** (bī'ōpsi) *n.* [Gk. *bios*, life; *opsis*, sight.] Examination of living organisms, organs, or tissues.

**biorgan** (bī'ōrgān) *n.* [Gk. *bios*, life; *organon*, instrument.] An organ in the physiological sense, not necessarily a morphological unit.

**bios** (bī'ōs) *n.* [Gk. *bios*, life.] Organic life, plant or animal; a complex mixture of vitamins or growth factors; B complex, *q.v.*

**bioseries** (bī'ōsērīēz) *n.* [Gk. *bios*, life; L. *series*, row.] A succession

of changes of any single heritable character.

**biosomes** (bī'ōsōmz) *n. plu.* [Gk. *bios*, life; *soma*, body.] Structural and functional units in cytoplasm, as chondriosomes, chromidia and plastids.

**biosphere** (bī'ōsfēr) *n.* [Gk. *bios*, life; *sphaira*, globe.] The part of the globe containing living organisms.

**biostatics** (bī'ōstāt'iks) *n.* [Gk. *bios*, life; *statos*, stationary.] The science of structure in relation to function of organisms.

**biosystematics**,—genonomy; taxonomy.

**biota** (bī'ōtā) *n.* [Gk. *bios*, life.] The fauna and flora of a region.

**biotic** (bī'ōt'ik) *a.* [Gk. *biotikos*, *pert.* life.] *Pert.* life; vital.

**biotic community**,—a community of plants and animals as a whole.

**biotic potential**,—highest possible rate of population increase, resulting from maximum natality and minimum mortality.

**biotin** (bī'ōtīn) *n.* [Gk. *bios*, life.] Vitamin H, a growth substance of yeast, also obtained from liver; or coenzyme R, required by nitrogen-fixing bacteria; antiperoxidase factor; antiavidin;  $C_{10}H_{16}O_3N_2S$ .

**biotonus** (bī'ōtōnūs) *n.* [Gk. *bios*, life; *tonos*, tension.] The ratio between assimilation and dissimilation of biogens.

**biotope** (bī'ōtōp) *n.* [Gk. *bios*, life; *topos*, place.] An area in which the main environmental conditions and biotypes adapted to them are uniform; a place where organisms can survive; also, microhabitat.

**biotype** (bī'ōtīp) *n.* [Gk. *bios*, life; L. *typus*, image.] Type of plant or animal; all the individuals of equal genotype.

**biovulate** (bī'ōv'ulāt) *a.* [L. *bis*, twice; *ovum*, egg.] Containing two ovules.

**bipaleolate** (bīpāl'ēōlāt) *a.* [L. *bis*, twice; *palea*, chaff.] Furnished with two small paleae.

**bipalmate** (bīpāl'māt) *a.* [L. *bis*, twice; *palma*, palm of hand.] Lobed with the lobes again lobed.

**biparietal** (bī'pāri'ētāl) *a.* [L. *bis*, twice; *paries*, wall.] Connected with the two parietal eminences.

**biparous** (bīp'ārūs) *a.* [L. *bis*, twice; *parere*, to bear.] Having two young at a time; dichotomous, *appl.* branching.

**bipectinate** (bīpēk'tināt) *a.* [L. *bis*, twice; *pecten*, comb.] Having the two margins furnished with teeth like a comb.

**biped** (bī'pēd) *n.* [L. *bis*, twice; *pes*, foot.] A two-footed animal.

**bipenniform** (bīpēn'ifōrm) *a.* [L. *bis*, twice; *penna*, feather; *forma*, shape.] Feather-shaped, with sides of vane of equal size; *appl.* some muscles.

**bipetalous** (bīpēt'ālūs) *a.* [L. *bis*, twice; Gk. *petalon*, leaf.] With two petals.

**bipinnaria** (bīpinā'riā) *n.* [L. *bis*, twice; *pinna*, feather.] An asteroid larva with two bands of cilia.

**bipinnate** (bīpin'āt) *a.* [L. *bis*, twice; *pinna*, feather.] Having leaflets growing in pairs on paired stems.

**bipinnatifid** (bī'pināt'ifid) *a.* [L. *bis*, twice; *pinna*, feather; *findere*, to cleave.] With leaves segmented and these segments again divided.

**bipinnatipartite** (bī'pināt'ipārtīt) *a.* [L. *bis*, twice; *pinna*, feather; *partiri*, to divide.] Bipinnatifid, but with divisions extending nearly to midrib.

**bipinnatisect** (bī'pināt'isēkt) *a.* [L. *bis*, twice; *pinna*, feather; *secare*, to cut.] Bipinnatifid, but with divisions extending to midrib.

**biplicate** (bī'plikāt) *a.* [L. *bis*, twice; *plicare*, to fold.] Having two folds.

**bipocillus** (bī'pōsil'ūs) *n.* [L. *bis*, twice; *pocillum*, little cup.] A microscle with curved shaft and cup-shaped expansion at each end.

**bipolar** (bīpō'lār) *a.* [L. *bis*, twice; *polus*, pole.] Having, located at, or *pert.* two ends or poles; *appl.* nerve cells having a process at each end; *appl.* allied species

occurring towards Arctic and Antarctic regions.

**bipolarity** (bī'pōlār'itī) *n.* [L. *bis*, twice; *polus*, pole.] The condition of having two polar processes; condition of having two distinct poles, as vegetative and animal poles in an egg.

**biradial** (bīrā'diāl) *a.* [L. *bis*, twice; *radius*, ray.] Symmetrical both radially and bilaterally, as some coelenterates; disymmetrical.

**biramose** (bīrā'mōs), **biramous** (bīrā'mūs) *a.* [L. *bis*, twice; *ramus*, branch.] Divided into two branches.

**birostrate** (bīrōs'trāt) *a.* [L. *bis*, twice; *rostrum*, beak.] Furnished with two beak-like processes.

**birth pore**,—uterine pore of trematodes and cestodes; birth-opening of redia of trematodes.

**biseptate** (bīsēp'tāt) *a.* [L. *bis*, twice; *septum*, fence.] With two partitions.

**biserial** (bīsēr'iāl) *a.* [L. *bis*, twice; *series*, row.] Arranged in two rows or series; biseriate.

**biserrate** (bīsēr'āt) *a.* [L. *bis*, twice; *serra*, saw.] Having marginal teeth which are themselves notched.

**bisexual** (bīsek'sūāl) *a.* [L. *bis*, twice; *sexus*, sex.] Having both male and female reproductive organs; hermaphrodite; amphisporangiate, *q.v.*

**bisporangiate** (bī'sporān'jiāt) *a.* [L. *bis*, twice; Gk. *sporos*, seed; *anggeion*, vessel.] Having both micro- and megasporangia; *appl.* strobilus consisting of both micro- and megasporophylls.

**bistephanic** (bī'stēfān'ik) *a.* [L. *bis*, twice; Gk. *stephanos*, crown.] Joining two points where coronal suture crosses superior temporal ridges.

**bistipulate** (bīstīp'ulāt) *a.* [L. *bis*, twice; *stipula*, stem.] Provided with two stipules.

**bistrate** (bī'strāt) *a.* [L. *bis*, twice; *stratum*, layer.] Having two layers; *appl. e.g.* indumentum.

**bistratose** (bīstrāt'ōs) *a.* [L. *bis*, twice; *stratum*, layer.] With cells arranged in two layers.

**bisulcate** (bisŭl'kāt) *a.* [L. *bis*, twice ; *sulcus*, groove.] Having two grooves.

**bitemporal** (bitēm'pōrāl) *a.* [L. *bis*, twice ; *tempora*, temples.] *Appl.* two temporal bones ; a line joining posterior ends of two zygomatic processes.

**bitermate** (bitēr'nāt) *a.* [L. *bis*, twice ; *terni*, three by three.] Ternate with each division itself again ternate.

**bivalent** (bivā'lēnt, biv'alēnt) *a.* [L. *bis*, twice ; *valere*, to be strong.] *Appl.* paired homologous chromosomes.

**bivalve** (bi'vālv) *a.* [L. *bis*, twice ; *valvae*, folding doors.] Consisting of two plates or valves, as a mussel shell ; or *appl.* a seed-capsule of similar structure.

**biventer cervicis** (bivēn'tēr sērvi'sis) *n.* [L. *bis*, twice ; *venter*, belly ; *cervix*, neck.] The spinalis capitis, or medial part of semispinalis, a muscle of neck, consisting of two fleshy ends with narrow tendinous portion in middle.

**biventral** (bivēn'trāl) *a.* [L. *bis*, twice ; *venter*, belly.] *Appl.* muscles of the biventer type ; digastric ; *appl.* a lobule of the cerebellum.

**bivittate** (bivīt'āt) *a.* [L. *bis*, twice ; *vitta*, band.] With two oil receptacles ; with two stripes.

**bivium** (biv'ium) *n.* [L. *bis*, twice ; *via*, way.] Generally the posterior pair of ambulacral areas in certain Echinoidea ; the two rays between which the madreporite lies.

**bladder** (blād'ēr) *n.* [A.S. *blaedre*, bag.] A membranous sac filled with air or fluid ; a cyst.

**bladderworm stage**, — cysticercus stage in tape-worms.

**blade** (blād) *n.* [A.S. *blaed*, leaf.] The flat part of leaf of grasses ; lamina.

**Blandin's glands** [*P.-F. Blandin*, French surgeon]. Anterior lingual glands ; glands of Nuhn.

**blastaea** (blāstē'ā) *n.* [Gk. *blastos*, bud.] A planaea or ciliated planula, a hypothetical stage in evolution.

**blastelasma** (blāst'ēlās'mā) *n.* [Gk. *blastos*, bud ; *elasma*, plate.] Any

germ layer formed after formation of epiblast and hypoblast.

**blastema** (blāst'ēmā) *n.* [Gk. *blastema*, bud.] Formative substance in an egg ; primordium of an organ ; thallus of a lichen.

**blastic** (blās'tik) *a.* [Gk. *blastos*, bud.] *Pert.* or stimulating enlargement by cell-division ; *opp.* trophic.

**blastocarpous** (blās'tōkār'pūs) *a.* [Gk. *blastos*, bud ; *karpos*, fruit.] Developing while still surrounded by pericarp.

**blastochrome** (blās'tōkēm) *n.* [Gk. *blastos*, bud ; *ochema*, vessel.] A reproductive individual in some Medusae.

**blastocholines** (blās'tōkō'lēnz) *n. plu.* [Gk. *blastos*, bud ; *cholos*, halting.] Various substances, present in sporangia, seeds, and fruits, which prevent premature germination ; germination inhibitors.

**blastochyle** (blās'tōkīl) *n.* [Gk. *blastos*, bud ; *chylos*, juice.] The fluid in a blastocoel or segmentation-cavity.

**blastocoel** (blās'tōsēl) *n.* [Gk. *blastos*, bud ; *koilos*, hollow.] The segmentation-cavity, cavity of a blastula.

**blastocolla** (blās'tōkōl'ā) *n.* [Gk. *blastos*, bud ; *kolla*, glue.] A gummy substance coating certain buds.

**blastocone** (blās'tōkōn) *n.* [Gk. *blastos*, bud ; *konos*, cone.] An outer larger cell of first circumferential division, in segmentation of certain eggs.

**blastocyst** (blās'tōsist) *n.* [Gk. *blastos*, bud ; *kystis*, bladder.] The germinal vesicle.

**blastocyte** (blās'tōsīt) *n.* [Gk. *blastos*, bud ; *kytos*, hollow.] Any undifferentiated embryonic cell.

**blastoderm** (blās'tōdērm) *n.* [Gk. *blastos*, bud ; *derma*, skin.] The germinal disc.

**blastodermic vesicle**, — hollow sphere of cells, an early stage in development of a fertilised ovum.

**blastodisc** (blās'tōdisk) *n.* [Gk. *blastos*, bud; *diskos*, disk.] The germinal area of a developing ovum.

**blastogenesis** (blās'tōjēn'ēsis) *n.* [Gk. *blastos*, bud; *genesis*, descent.] Gemmation or reproduction by budding; transmission of inherited characters by means of germ-plasm only.

**blastogenic** (blās'tōjēn'ik) *a.* [Gk. *blastos*, bud; *genos*, offspring.] *Appl.* inactive idioplasm unalterable till time and place of activity are reached; arising from changes in germ cells; *appl.* characteristics of germinal constitution.

**blastokinesis** (blās'tōkīnē'sis) *n.* [Gk. *blastos*, bud; *kinesis*, movement.] Movement of embryo in the egg, as in certain insects and cephalopods.

**blastomere** (blās'tōmēr) *n.* [Gk. *blastos*, bud; *meros*, part.] One of the cells formed during primary divisions of an egg; cleavage cell.

**blastoneuropore** (blās'tōnū'rōpōr) *n.* [Gk. *blastos*, bud; *neuron*, nerve; *poros*, passage.] A temporary passage connecting blastopore and neuropore.

**blastophore** (blās'tōfōr) *n.* [Gk. *blastos*, bud; *pherein*, to bear.] Embryonic origin of plumule; the reproductive body in Alcyonaria; central part of spermocyte mass which remains unchanged through spermatogenesis in Annelida.

**blastophthoria** (blās'tōfthō'rīā) *n.* [Gk. *blastos*, bud; *phthora*, corruption.] Any injurious effect on germ cells or on germ plasm.

**blastopore** (blās'tōpōr) *n.* [Gk. *blastos*, bud; *poros*, passage.] Channel leading into archenteron of gastrula.

**blastosphere** (blās'tōsfēr) *n.* [Gk. *blastos*, bud; *sphaira*, globe.] The blastula; blastodermic vesicle; a hollow ball of cells.

**blastospore** (blās'tōspōr) *n.* [Gk. *blastos*, bud; *sporos*, seed.] An attached thallospore developed by

budding and itself capable of budding, as of yeast cells.

**blastostyle** (blās'tōstil) *n.* [Gk. *blastos*, bud; *stylos*, pillar.] In Hydrozoa, a columniform zooid with or without mouth and tentacles, bearing gonophores.

**blastozoite** (blās'tōzō'it) *n.* [Gk. *blastos*, bud; *zoe*, life.] An individual organism produced by budding.

**blastozoid** (blās'tōzō'oid) *n.* [Gk. *blastos*, bud; *zoon*, animal; *eidōs*, form.] A larval bud in precocious budding in ascidians.

**blastula** (blās'tūlā) *n.* [L. *dim.* of Gk. *blastos*, bud.] A hollow ball of cells, with wall usually one layer thick; blastosphere.

**blastulation** (blās'tūlā'shūn) *n.* [L. *blastula*, little bud.] Formation of blastulae.

**bleeder**,—an individual subject to haemophilia, *q.v.*

**bleeding**, of plants, exudation of watery sap from vessels at a cut surface, due to root-pressure.

**blended inheritance**,—mixed race or descent; mingling or non-segregation of parental characteristics.

**blending** (blēn'dlīng) *n.* [A.S. *blandan*, to mix.] A racial hybrid.

**blennoid** (blēn'oid) *a.* [Gk. *blennos*, mucus; *eidōs*, form.] Resembling mucus.

**blepharal** (blēf'ārāl) *a.* [Gk. *blepharon*, eyelid.] *Pert.* eyelids.

**blepharoplast** (blēf'ārōplāst) *n.* [Gk. *blepharis*, eyelash; *plastos*, formed.] A basal granule in relation with a motor cell organ, as the flagellum of Flagellata; blepharoblast.

**blight** (blīt) *n.* [A.S. *blaecan*, to grow pale.] An insect or fungus producing a plant disease; the disease itself.

**blind pit**,—a cell-wall pit which is not backed by a complementary pit.

**blind spot**,—region of retina devoid of rods and cones and where optic nerve enters; optic disc.

**blister** (blis'ter) *n.* [A.S. *blowan*, to blow.] A subcutaneous bubble or bladder filled with fluid; a certain plant disease.

**blood** (blūd) *n.* [A.S. *blōd*, blood.] The fluid circulating in the vascular system of animals, distributing food-material and oxygen and collecting waste products.

**blood cells**,—cells derived by mitosis from ordinary mesoderm cells; primitive haematoblasts.

**blood crystals**,—crystals of haemoglobin, haemin, or haematoidin, which form when blood is shaken up with chloroform or ether.

**blood dust**,—fine droplets of neutral fats present in the blood stream; haemokonia.

**blood gills**,—delicate blood-filled sacs functioning in uptake of salts, in certain insects.

**blood groups**,—types of blood depending on presence or absence of two agglutinogens (A and B) in the red corpuscles and two agglutinins ( $\alpha$  or anti-A, and  $\beta$  or anti-B) in serum or plasma: A cells agglutinate with B type serum, B with A type, AB with A and B type, and O cells not agglutinating with A and B types; *cf.* universal donor, universal recipient.

**blood islands**,—isolated reddish patches in mesoderm, in which primitive erythroblasts are found enclosed in a mesodermal syncytium; blood anlage, haemangioblast.

**blood platelets**,—colourless bodies about one-third the size of red corpuscles, and formed from megakaryocytes, and agglutinating in shed blood; thrombocytes; thromboplastids.

**blood plates**,—minute amoeboid protoplasmic bodies found in blood.

**blood serum**,—fluid or plasma left after removal of corpuscles and fibrin.

**blood vessel**,—any vessel or space in which blood circulates; strictly used only in regard to special vessels with well-defined walls.

**bloom**,—a layer of wax particles on external surface of certain fruits, as grapes, peaches; blossom or flower.

**blubber** (blüb'ēr) *n.* [M.E. *blober*, a bubble.] Fat of whales, seals, etc., lying between outer skin and muscle layer.

**blue timber**,—a wood disease produced by fungus, causing a bluish discoloration.

**body blight**,—fungal disease of trees.

**body cavity**,—coelom or space in which viscera lie, mesodermal in origin, and schizocoelic or enterocoelic in development; considered primarily, the generative cavity.

**body cell**,—a somatic cell as distinct from a germ cell; an antheridial cell.

**body stalk**,—a band of mesoderm connecting caudal end of embryo with chorion.

**Bojanus, organ of** [*L. H. Bojanus*, Alsatian zoologist]. Excretory organ in lamellibranchs.

**bone** (bōn) *n.* [A.S. *ban*, bone.] Connective tissue in which the ground-substance contains salts of lime.

**bone-beds**,—deposits formed largely by remains of bones of fishes and reptiles, as Liassic bone-beds.

**bones of Bertin** [*E. J. Bertin*, French anatomist]. Thin anterior coverings of sphenoidal sinuses.

**bonitation** (bōnitā'shūn) *n.* [*L. bonitas*, goodness.] The evaluation of the numerical distribution of a species in a particular locality or season, in relation to agricultural, veterinary, or medical implications.

**book gill**,—a gill composed of delicate leaf-like lamellae placed one over the other like leaves of a book, as seen in *Limulus*.

**book lung**,—a gill similar to a book gill, but modified for air-breathing, and open to exterior only by a small slit, as in scorpions.

**booted** (boot'ēd) *a.* [*O.F. boue*, boot.] Equipped with raised horny plates of skin, as feet of some birds.



**bordered pit**,—a form of pit, developed on walls of tracheids and wood-vessels, with overarching border of secondary cell-wall.

**boreal** (bō'rēāl) *a.* [L. *boreas*, north wind.] *Appl.* or *pert.* northern biogeographical region; holarctic except Sonoran, or restricted to nearctic; *pert.* post-glacial age with continental type of climate.

**bosseted** (bös'elätēd) *a.* [M.E. *bosse*, knob.] Covered with knobs.

**bosset** (bös'ēt) *n.* [M.E. *bosse*, knob.] The beginning of horn formation in deer in the first year.

**bostryx** (bös'trīks) *n.* [Gk. *bostrychos*, curl.] A helicoid cyme, cymose inflorescence with blooms on only one side of axis.

**Botallo's duct** [L. *Botallo*, Italian surgeon]. Ductus arteriosus, a small blood vessel representing sixth gill arch and connecting pulmonary with systemic arch.

**botany** (bōt'ānī) *n.* [Gk. *botane*, pasture.] The branch of biology dealing with plants; phytozoology.

**bothridium** (bōthrid'iūm) *n.* [Gk. *bothros*, trench; *idion*, dim.] A muscular cup-shaped outgrowth from scolex of tape-worms; a phyllidium.

**bothrium** (bōth'rīūm) *n.* [Gk. *bothros*, trench.] A sucker; a sucking groove in scolex of tape-worms.

**botryoidal** (bōtrīoid'āl) *a.* [Gk. *botrys*, bunch of grapes; *eidos*, form.] In the form of a bunch of grapes; *appl.* tissue of branched canals surrounding enteric canal in leeches.

**botryose** (bōt'rīōs) *a.* [Gk. *botrys*, bunch of grapes.] Racemose; botryoidal.

**botuliform** (bōt'ulifōrm) *a.* [L. *botulus*, sausage; *forma*, form.] Sausage-shaped; allantoid.

**bouillon** (booyōng) *n.* [F. *bouillon*, broth.] An infusion or broth, containing watery extract of meat, also peptone, for the cultivation of bacteria.

**bouquet** (bookā', book'ā) *n.* [F.

*houquet*, nosegay.] Arrangement of chromosomes in loops with their ends near one side of nuclear wall during zygotene and pachytene in some organisms.

**bouton** (bootōng) *n.* [F. *bouton*, bud.] Terminal bulb of arborisation of an axon; labellum, in Hymenoptera.

**Bowman's capsule** [Sir W. Bowman, English histologist]. The vesicle of a renal tubule; capsula glomeruli.

**Bowman's glands**,—serous glands in corium of olfactory mucous membrane.

**Bowman's membrane**,—anterior 'elastic' membrane of cornea.

**braccate** (brāk'āt) *a.* [L. *braccæ*, breeches.] Having additional feathers on legs or feet, *appl.* birds.

**brachelytrous** (brākēl'itrūs) *a.* [Gk. *brachys*, short; *elytron*, sheath.] Having short wing-covers.

**brachia** (brāk'iā) *n. plu.* [L. *brachium*, arm.] The arms; two spirally coiled structures, one at each side of mouth, in Brachiopoda; cerebellar peduncles; white lateral bands of colliculi of corpora quadrigemina. *Sing.* brachium.

**brachial** (brāk'iāl) *a.* [L. *brachium*, arm.] *Pert.* arm; arm-like.

**brachialis** (brāk'iāl'is) *n.* [L. *brachium*, arm.] A flexor muscle of the forearm, from lower half of front of humerus to coronoid process of ulna; brachialis anticus.

**brachiate** (brāk'iāt) *a.* [L. *brachium*, arm.] Branched; having opposite paired branches on alternate sides.

**brachidia** (brāk'id'iā) *n. plu.* [Gk. *brachion*, arm; *idion*, dim.] Calcareous skeleton supporting brachia in certain Brachiopoda.

**brachiferous** (brākif'ērūs), **brachigerous** (brākij'ērūs) *a.* [L. *brachium*, arm; *ferre*, *gerere*, to carry.] Branched.

**brachiocephalic** (brāk'itōkēfāl'ik, -sēf-) *a.* [L. *brachium*, arm; Gk. *kephale*, head.] *Pert.* arm and head; *appl.* artery.

**brachiocubital** (brāk'fōkū'bītāl) *a.* [L. *brachium*, arm; *cubitum*, forearm.] *Pert.* arm and forearm.

**brachiolaria** (brāk'fōlār'riā) *n.* [L. *brachiolum*, small arm.] A larval stage in metamorphosis of some starfishes.

**brachiole** (brāk'fōl) *n.* [L. *brachiolum*, small arm.] A pinnule-like structure on ambulacral margin in Blastoidea.

**brachiorachidian** (brāk'fōrāk'īd'īān) *a.* [Gk. *brachion*, arm; *rhachis*, spine.] *Pert.* arm and spine.

**brachioradialis** (brāk'fōrādīā'līs) *n.* [L. *brachium*, arm; *radius*, ray.] The supinator longus muscle of forearm.

**brachium** (brāk'fūm) *n.* [L. *brachium*, arm.] Arm or branching structure; upper limb of vertebrates; a bundle of fibres connecting cerebellum to cerebrum or to pons.

**brachyblast**,—brachyplast, *q.v.*

**brachycephalic** (brāk'fēfāl'ik, -sēf-) *a.* [Gk. *brachys*, short; *kephale*, head.] Short-headed; with cephalic index of over eighty; *cf.* dolichocephalic.

**brachycerous** (brāk'is'ērūs) *a.* [Gk. *brachys*, short; *keras*, horn.] Short-horned; with short antennae.

**brachycnemic** (brāk'fknē'mīk) *a.* [Gk. *brachys*, short; *kneme*, tibia.] *Appl.* arrangement of mesenteries of Zoantharia where the sixth protocone is imperfect.

**brachydactyly** (brāk'fđāk'tīlī) *n.* [Gk. *brachys*, short; *daktylos*, digit.] Brachydactylous condition, viz. having digits abnormally short.

**brachydont** (brāk'fđont) *a.* [Gk. *brachys*, short; *odous*, tooth.] *Appl.* molar teeth with low crowns; also brachyodont.

**brachymelosis** (brāk'fmiō'sīs) *n.* [Gk. *brachys*, short; *meion*, smaller.] A third karyokinetic or second reduction division, as in asci; meiosis involving only one division.

**brachyodont**,—brachydont, *q.v.*

**brachyurous**,—brachyural, *q.v.*

**brachyplast** (brāk'fplāst) *n.* [Gk. *brachys*, short; *plastos*, formed.] A short branch or spur bearing leaf tufts, occurring with normal branches on the same plant.

**brachypleural** (brāk'fplōō'rāl) *a.* [Gk. *brachys*, short; *pleuron*, side.] With short pleura or side plates.

**brachypodous** (brāk'f'ōdūs) *a.* [Gk. *brachys*, short; *pous*, foot.] With short legs, or stalk.

**brachypterous** (brāk'f'tērūs) *a.* [Gk. *brachys*, short; *pteron*, wing.] With short wings.

**brachysclereid** (brāk'fisklē'rēid) *n.* [Gk. *brachys*, short; *skleros*, hard; *eidos*, form.] A stone cell.

**brachysm** (brāk'fism) *n.* [Gk. *brachys*, short.] Dwarfism in plants caused by shortening of internodes.

**brachystomatous** (brāk'fistōm'ātūs) *a.* [Gk. *brachys*, short; *stoma*, mouth.] With short proboscis; *appl.* certain insects.

**brachytic** (brāk'f'ik) *a.* [Gk. *brachytes*, shortness.] Dwarfish, *appl.* plants; exhibiting or *pert.* brachysm.

**brachyural** (brāk'fūrāl) *a.* [Gk. *brachys*, short; *oura*, tail.] Having short abdomen usually tucked in below thorax, *appl.* certain crabs.

**brachyuric** (brāk'fūr'īk) *a.* [Gk. *brachys*, short; *oura*, tail.] Short-tailed.

**bract** (brākt) *n.* [L. *bractea*, thin plate of metal.] A floral leaf; a modified leaf in whose axil a flower arises; a hydrophyllum in Siphonophora; distal exite of sixth appendage of Apus.

**bract scales**,—small scales developed directly on axis of cones; *cf.* ovuliferous scales.

**bracteal** (brāk'tēāl) *a.* [L. *bractea*, thin metal plate.] Like a bract; bracteiform.

**bracteate** (brāk'tēāt) *a.* [L. *bractea*, thin metal plate.] Having bracts.

**bracteolate** (brāk'tēōlāt) *a.* [L. *bractea*, thin metal plate.] *Appl.* flowers with bracteoles.

**bracteole** (brāk'tēōl) *n.* [L. *bractea*, thin metal plate.] Secondary bract at base of flower; bractlet.

**bracteose** (brāk'tēōs) *a.* [L. *bractea*, thin metal plate.] With many bracts.

**bractlet**,—bracteole.

**bradyauxesis** (brād'îōksē'sis) *n.* [Gk. *bradys*, slow; *auxesis*, growth.] Relatively slow growth; growth of a part at a slower rate than that of the whole; *opp.* tachyauxesis.

**bradygenesis** (brād'îjēn'ēsis) *n.* [Gk. *bradys*, slow; *genesis*, descent.] Retarded development, in phylogeny; *opp.* tachygenesis.

**bradytelic** (brādītēl'ik) *a.* [Gk. *bradys*, slow; *telos*, fulfilment.] Evolving at a rate slower than the standard rate; *opp.* tachytelic; *cf.* horotelic.

**brain** (brān) *n.* [O.E. *braegen*, brain.] Centre of nervous system; mass of nervous matter in vertebrates at anterior end of spinal cord, lying in cranium; in invertebrates, supraoesophageal or suprapharyngeal ganglia.

**brain sand**,—granular bodies of calcium and ammonium and magnesium phosphates, occurring in pineal gland and pia mater; corpora amylacea; acervulus cerebri.

**branchia** (brāng'kiā) *n.*, **branchiae** (brāng'kiē) *plu.* [Gk. *branchia*, gills.] Gills.

**branchiac** (brāng'kiāk), **branchial** (brāng'kiāl) *a.* [Gk. *branchia*, gills.] *Pert.* gilis.

**branchial arch**,—one of the bony or cartilaginous arches on side of the pharynx posterior to hyoid arch, and supporting gill bars.

**branchial grooves**,—outer pharyngeal grooves or visceral clefts, *q.v.*

**branchiate** (brāng'kiāt) *a.* [Gk. *branchia*, gills.] Having gills.

**branchicolous** (brāngkik'ōlūs) *a.* [Gk. *branchia*, gills; L. *colere*, to inhabit.] Parasitic on fish gills; *appl.* certain crustaceans.

**branchiform** (brāng'kifōrm) *a.* [Gk.

*branchia*, gills; L. *forma*, shape.] Gill-like.

**branchihyal** (brāng'kihi'āl). [Gk. *branchia*, gills; *hyooides*, T-shaped.] An element of a branchial arch.

**branchiocardiac** (brāng'kiōkār'diāk) *a.* [Gk. *branchia*, gills; *kardia*, heart.] *Pert.* gills and heart; *appl.* vessel given off ventrally from ascidian heart; *appl.* vessels conveying blood from gills to pericardial sinus in certain crustaceans.

**branchiomere** (brāng'kiōmēr) *n.* [Gk. *branchia*, gills; *meros*, part.] A branchial segment.

**branchiopallial** (brāng'kiōpāl'iāl) *a.* [Gk. *branchia*, gills; L. *pallium*, mantle.] *Pert.* gill and mantle of molluscs.

**branchiostegal** (brāng'kiōs'tēgāl) *a.* [Gk. *branchia*, gills; *stega*, roof.] With or *pert.* a gill cover; *appl.* membrane, rays.

**branchiostege** (brāng'kiōstēj') *n.* [Gk. *branchia*, gills; *stega*, roof.] The branchiostegal membrane.

**branchiostegite** (brāng'kiōs'tējīt) *n.* [Gk. *branchia*, gills; *stega*, roof.] Expanded lateral portion of carapace forming gill cover in certain Crustacea.

**branchireme** (brāng'kirēm) *n.* [L. *branchiae*, gills; *remus*, oar.] A branchiate limb; locomotory and respiratory limb of Branchiopoda.

**brand** (brānd) *n.* [A.S. *beornan*, to burn.] A burnt appearance on leaves, caused by fungi.

**bregma** (brēg'mă) *n.* [Gk. *bregma*, fore-part of head.] That part of skull where frontals and parietals meet; intersection of sagittal and coronal sutures.

**brepheic** (brēf'ik) *a.* [Gk. *brepheikos*, childish.] *Appl.* a larval phase preceding that of adult form; neanic.

**brevicaudate** (brēv'ikô'dāt) *a.* [L. *brevis*, short; *cauda*, tail.] With a short tail.

**brevifoliate** (brēv'ifô'lîāt) *a.* [L. *brevis*, short; *folium*, leaf.] Having short leaves.

**brevilingual** (brév'íling'gwäl) *a.* [L. *brevis*, short; *lingua*, tongue.] With short tongue.

**breviped** (brév'ípéd) *a.* [L. *brevis*, short; *pes*, foot.] Having short legs; *appl.* certain birds.

**brevipennate** (brév'ipēn'át) *a.* [L. *brevis*, short; *penna*, feather.] With short wings.

**brevirostrate** (brév'irōs'trāt) *a.* [L. *brevis*, short; *rostrum*, beak.] With short beak or rostrum.

**brevissimus oculi**, — obliquus inferior, shortest muscle of eye.

**bridge corpuscle**, — desmosome, *q.v.*

**Broca's area** [P. P. Broca, French surgeon]. Parolfactory area of brain.

**Broca's gyrus**, — left inferior frontal gyrus, speech centre in cerebral cortex.

**brochidodrome** (brōkíd'ōdrōm) *a.* [Gk. *brochos*, loop; *dromein*, to run.] *Appl.* veins in leaves when they form loops within the blade.

**brochonema** (brōkōnē'mā) *n.* [Gk. *brochos*, loop; *nema*, thread.] The spireme in loops to the number of chromosome pairs to be formed.

**bromatium** (brōmā'shīūm) *n.* [Gk. *broma*, food.] A swelling on a fungus cultivated by ants, and serving as food.

**bronchi** (brōng'kī) *n. plu.* [Gk. *brongchos*, windpipe.] Tubes connecting trachea with lungs. *Sing.* bronchus.

**bronchia** (brōng'kiā) *n. plu.* [Gk. *brongchos*, windpipe.] The subdivisions or branches of each bronchus.

**bronchial** (brōng'kiāl) *a.* [Gk. *brongchos*, windpipe.] *Pert.* bronchi.

**bronchiole** (brōng'kiōl) *n.* [Gk. *brongchos*, windpipe.] A small terminal branch of bronchi.

**bronchopulmonary** (brōng'kōpūl'mōnāri) *a.* [Gk. *brongchos*, windpipe; L. *pulmo*, lung.] *Pert.* bronchi and lungs.

**bronchotracheal** (brōng'kōtrā'kēal) *a.* [Gk. *brongchos*, windpipe; L. *trachea*, trachea.] *Pert.* bronchi and trachea.

**bronchovesicular** (brōng'kōvēsik'ū-lār) *a.* [Gk. *brongchos*, windpipe; L. *vesicula*, little sac.] *Pert.* bronchial tubes and lung cells.

**bronchus**, — *sing.* of bronchi.

**brood bud**, — a spore of certain types of sporangia; a soredium; a bulbil.

**brood cells**, — gonidia, *q.v.*

**brood pouch**, — a sac-like cavity in which eggs or embryos are placed; a space formed by overlapping plates attached to bases of thoracic limbs in certain Crustacea.

**brown body**, — a brown, rounded mass of compacted degenerate organs in some polyzoa; nephrocyte in ascidians.

**brown funnels**, — a single pair of organs on dorsal aspect of posterior end of pharynx, in Amphioxus; atrio-coelomic funnels; brown canals.

**Brownian movements** [R. Brown, Scottish botanist]. The passive vibratory movements of fine granules when suspended in a fluid.

**Bruch's membrane** [C. W. L. Bruch, German anatomist]. The basal membrane, inner layer of choroid; lamina basalis.

**Brunner's glands** [J. C. Brunner, Swiss anatomist]. Small tubuloracemose glands containing a proteolytic enzyme, in submucous coat of small intestine; duodenal glands.

**bryology** (brīōl'ōjī) *n.* [Gk. *bryon*, moss; *logos*, discourse.] The science dealing with mosses, also with liverworts; muscology.

**bryophyte** (brī'ōfit) *n.* [Gk. *bryon*, moss; *phyton*, plant.] Any of the mosses, or liverworts.

**bryozoon** (brī'ōzō'ōn) *n.* [Gk. *bryon*, moss; *zoon*, animal.] A polyzoon, so named from moss-like appearance.

**B-substance**, — intermedin, *q.v.*

**buccae** (būk'ē) *n. plu.* [L. *bucca*, cheek.] The cheeks.

**buccal** (būk'āl) *a.* [L. *bucca*, cheek.] *Pert.* the cheek or mouth.

**buccinator** (būk'sinā'tōr) *n.* [L. *buccinator*, trumpeter.] A broad thin muscle of the cheek.

**buccolabial** (bük'ölā'biāl) *a.* [L. *bucca*, cheek; *labium*, lip.] *Pert.* mouth cavity and lips.

**buccolingual** (bük'öling'gwäl) *a.* [L. *bucca*, cheek; *lingua*, tongue.] *Pert.* cheeks and tongue.

**bucconasal** (bük'onā'zäl) *a.* [L. *bucca*, cheek; *nasus*, nose.] *Pert.* cheek and nose; *appl.* membrane closing posterior end of olfactory pit.

**buccopharyngeal** (bük'öfärin'jēäl) *a.* [L. *bucca*, cheek; Gk. *pharynx*, throat.] *Pert.* cheeks and pharynx; *appl.* membrane and fascia.

**bud** (büd) *n.* [M.E. *budde*, bud.] A rudimentary shoot, or flower; a gemma.

**budding** (büd'ing) *n.* [M.E. *budde*, bud.] A method of reproduction seen in many primitive animals.

**buffer** (bü'tēr) *n.* [O.F. *bufte*, blow.] *Appl.* salt solution which minimises changes in pH when an acid or alkali is added; *appl.* genes controlling the action of an allelomorph, *i.e.* polygenes.

**bufotoxins** (bü'fótök'sinz) *n. plu.* [L. *bufo*, toad; Gk. *toxikon*, poison.] Toad venom, as bufotoxin,  $C_{34}H_{46}O_{10}$ , and bufonin,  $C_{34}H_{54}O_2$ .

**bulb** (bülb) *n.* [L. *bulbus*, globular root.] A specialised underground bud with thick fleshy leaves; a part resembling a bulb; a bulb-like dilatation; basal part of intro-mittent organ in spiders; the medulla oblongata.

**bulbar** (bül'bär) *a.* [L. *bulbus*, globular root.] *Pert.* bulb or bulb-like part; *pert.* medulla oblongata.

**bulbiferous** (bülbif'erüs) *a.* [L. *bulbus*, bulb; *ferre*, to carry.] Bulb-bearing.

**bulbil** (bül'bül) *n.* [L. *bulbus*, bulb.] A fleshy axillary bud which may fall and produce a new plant, as in some lilies; aerial bulb; any small bulb-shaped structure or dilatation.

**bulbocavernosus** (bü'l'bökävörnösüs) *n.* [L. *bulbus*, bulb; *cavernosus*, cavernous.] A muscle of perinaeum, ejaculator urinae in the male; sphincter of vagina.

**bulbonuclear** (bü'l'bönü'kläär) *a.* [L. *bulbus*, bulb; *nucleus*, kernel.] *Pert.* medulla oblongata and nuclei of cranial nerves.

**bulbo-urethral** (bü'l'böürē'thräl) *a.* [L. *bulbus*, bulb; Gk. *ourethra*, urethra.] *Appl.* two racemose glands, Cowper's or Méry's glands, opening into bulb of male urethra; also *appl.* the greater vestibular glands, Bartholin's glands, in the female.

**bulbous** (bü'l'büs) *a.* [L. *bulbus*, bulb.] Like a bulb; developing from a bulb; having bulbs.

**bulbus** (bü'l'büs) *n.* [L. *bulbus*, bulb.] A bulb; swollen base of stipe in agarics; the knob-like part found in connection with various nerves; a dilatation of base of aorta.

**bullae** (bool'ä) *n.* [L. *bullae*, bubble.] *Appl.* rounded prominence formed by bones of ear, tympanic bulla; *appl.* prominence of middle ethmoidal air cells.

**bullate** (bool'ät) *a.* [L. *bullae*, bubble.] Blistered-like; puckered like a savoy-cabbage leaf.

**bulliform** (bool'iförm) *a.* [L. *bullae*, bubble; *forma*, shape.] Bubble-shaped; *appl.* thin-walled cells which cause rolling, folding, or opening of leaves by turgor changes.

**bundle-sheath**,—a layer of large parenchymatous cells surrounding vascular tissue of leaf-vein.

**bunodont** (bü'nödönt) *a.* [Gk. *bounos*, mound; *odous*, tooth.] Having molar teeth with low conical cusps.

**bunoid** (bü'noid) *a.* [Gk. *bounos*, mound; *eidos*, form.] *Appl.* cusps of cheek-teeth, low and conical.

**bunolophodont** (bü'nölöf'ödönt) *a.* [Gk. *bounos*, mound; *lophos*, crest; *odous*, tooth.] Between bunodont and lophodont in structure, *appl.* cheek-teeth.

**bunoselenodont** (bū'nōsēlē'nōdōnt)

*a.* [Gk. *bounos*, mound; *selene*, moon; *odous*, tooth.] Having internal cusps bunoid, external selenoid; *appl.* cheek-teeth.

**bursa** (būr'sā) *n.* [L. *bursa*, purse.]

A sac-like cavity; a sac with viscid fluid to prevent friction at joints.

**bursa copulatrix**,—a genital pouch of various animals.

**bursa entiana**,—the short duodenum in Chondropterygii.

**bursa Fabricii**,—a sac opening into dorsal part of posterior region of cloaca in birds, and usually degenerating during adolescence.

**bursicule** (būr'sīkūl) *n.* [L. *dim.* of *bursa*, purse.] A small sac.

**buttress-roots**,—branch roots given off above ground, arching away from stem before entering soil, forming additional props.

**butyrinase** (bū'tīrīnās) *n.* [L. *butyrum*, butter.] An enzyme occurring in blood serum.

**byssal** (bīs'āl) *a.* [Gk. *byssos*, fine flax.] *Pert.* the byssus.

**byssogenous** (bīsōj'ēnūs) *a.* [Gk. *byssos*, fine flax; *genos*, birth.] Byssus-forming; *appl.* glands.

**byssoid** (bīs'oid) *a.* [Gk. *byssos*, fine flax; *eidos*, shape.] Resembling a byssus; formed of fine threads; byssaceous.

**byssus** (bīs'ūs) *n.* [Gk. *byssos*, fine flax.] The tuft of strong filaments secreted by a gland of certain bivalve molluscs, by which they become attached; the stalk of certain fungi.

## C

**cacogenesis** (kāk'ōjēn'ēsīs) *n.* [Gk. *kakos*, bad; *genesis*, descent.] Inability to hybridise; kakogenesis.

**cacogenic** (kāk'ōjēn'īk) *a.* [Gk. *kakos*, bad; *genos*, birth.] Dysgenic, *q.v.*

**cadophore** (kāđ'ōfōr) *n.* [Gk. *kados*, cask; *pherein*, to bear.] A dorsal

bud-bearing outgrowth in certain tunicates.

**caducibranchiate** (kāđū'sībrāng'-klāt) *a.* [L. *caducus*, falling; *branchiae*, gills.] With temporary gills.

**caducous** (kāđū'kūs) *a.* [L. *caducus*, falling.] *Pert.* parts that fall off early, *e.g.* calyx, stipules; fugacious; *cf.* deciduous.

**caecal** (sē'kāl) *a.* [L. *caecus*, blind.] Ending without outlet; *appl.* stomach with cardiac part prolonged into blind sac; *pert.* caecum.

**caecum** (sē'kūm) *n.* [L. *caecus*, blind.] A blind diverticulum or pouch from some part of alimentary canal.

**caecum cupulare**,—the closed apical end of the cochlear canal.

**Caenogaea** (sē'nōjē'ā) *n.* [Gk. *kainos*, recent; *gaia*, earth.] A zoogeographical region which includes the Nearctic, Palearctic, and Oriental regions; *cf.* Eogaea; also Cainogaea, Kainogaea.

**caenogenesis** (sē'nōjēn'ēsīs) *n.* [Gk. *kainos*, recent; *genesis*, origin.] The non-phylogenetic processes in development of an individual; development of transitory adaptations in early stages of an individual.

**caenogenetic** (sē'nōjēnēt'īk) *a.* [Gk. *kainos*, recent; *genesis*, origin.] Of recent origin.

**Caenozoic** (sēnōzō'īk) *a.* [Gk. *kainos*, recent; *zoe*, life.] *Pert.* age of mammals, geological era from Mesozoic to recent times; Tertiary and Quaternary periods; also Cainozoic, Cenozoic, Kainozoic.

**caespitose** (sēs'pītōs) *a.* [L. *caespes*, turf.] *Pert.* turf; having low, closely matted stems; growing densely in tufts; caespitulose, cespitose.

**caisson** (kā'sōn) *n.* [F. *caisson*, coffer.] Box-like arrangement of longitudinal muscle fibres in Lumbricidae.

**calamistrum** (kāl'āmīs'trūm) *n.* [L. *calamister*, curling-iron.] A comb-like structure on metatarsus of certain spiders.

**calamus** (kāl'āmūs) *n.* [L. *calamus*, reed.] A hollow reed-like stem without nodes; the quill of a feather; *calamus scriptorius*, the tip of posterior part of floor of fourth ventricle.

**calcaneus** (kalkā'nēūs) *n.* [L. *calx*, heel.] The heel; large bone or os calcis of tarsus which forms heel; *calcaneum*; process on metatarsus of birds.

**calcar** (kāl'kâr) *n.* [L. *calcar*, spur.] A hollow prolongation or tube at base of sepal or petal; spur-like process on leg or wing of birds; tibial spine in insects; process of calcaneus which supports web between leg and tail in bats; prehallux of frog; internal bony plate strengthening neck of femur; *calcar avis*, eminence in posterior part of lateral ventricle.

**calcarate** (kāl'kârât) *a.* [L. *calcar*, spur.] Spurred; *appl.* petal, corolla.

**calcareous** (kalkā'rēūs) *a.* [L. *calcararius*, limy.] Limy; growing on soil derived from decomposition of calcareous rocks; *pert.* limestone.

**calcariform** (kalkār'îfôrm) *a.* [L. *calcar*, spur; *forma*, shape.] Spurlike.

**calcarine** (kāl'kârîn) *a.* [L. *calcar*, spur.] *Pert.* calcar avis; *appl.* fissure extending to hippocampal gyrus, on medial surface of cerebral hemisphere.

**calcicole** (kāl'sîkōl) *n.* [L. *calx*, lime; *colere*, to dwell.] A plant which thrives in soils rich in calcium salts; *calcipete*, *calciphile*, *calciphyte*, *gypsophyte*. *a.* *Calcicolous*.

**calciferol**,—vitamin D<sub>2</sub>, occurring in fish liver oils, egg yolk, milk, etc., and conserving body calcium and phosphorus; antirachitic vitamin; isomeric with ergosterol from which it is formed by a series of photochemical reactions; C<sub>28</sub>H<sub>44</sub>O.

**calciferous** (kâlsîf'ērūs), **calcigerous** (kâlsîj'ērūs) *a.* [L. *calx*, lime; *ferre*, *gerere*, to carry.] Containing or producing lime salts.

**calcification** (kâlsîfikâ'shūn) *n.* [L. *calx*, lime; *facere*, to make.] The

deposition of lime salts in tissue; the process of accumulation of lime salts in soil development.

**calcifuge** (kâl'sîfūj) *n.* [L. *calx*, lime; *fugere*, to flee.] A plant which thrives only in soils poor in calcium carbonate; *calciphobe*.

**calcipete** (kâl'sîpēt) *n.* [L. *calx*, lime; *petere*, to go towards.] A *calcicole*, *g.v.*; a *calciphil* plant.

**calciphile**,—*calciphyte*.

**calciphobe**,—*calcifuge*.

**calciphyte** (kâl'sîfit) *n.* [L. *calx*, lime; Gk. *phyton*, plant.] A plant which thrives only on calcareous soils; *calcicole*, *calcipete*, *calciphile*, *gypsophyte*.

**calcivorous** (kâlsîv'örūs) *a.* [L. *calx*, lime; *vorare*, to devour.] *Appl.* plants which live on limestone.

**calcospherites** (kâl'kôsfē'rîts) *n. plu.* [L. *calx*, lime; *sphaera*, globe.] Concentrically laminated granules of calcium carbonate in Malpighian tubes of some insects, in cells associated with fat-body in certain larval Diptera.

**calicle**,—*calycle*, *g.v.*

**calines** (kâlēnz) *n. plu.* [Gk. *kalein*, to summon.] Plant hormones influencing growth of specific parts, as of root, stem, or leaf.

**callosal** (kâlō'sāl) *a.* [L. *callosus*, hard.] *Pert.* corpus callosum.

**callose** (kâl'ôs) *n.* [L. *callum*, hard skin.] An occasional carbohydrate or periodic component of plant cell walls, as on sieve-plates. *a.* Having callosities.

**callosity** (kâlōs'îti) *n.* [L. *callositas*, hardness.] Hardened and thickened area on skin, or on bark.

**callow** (kâl'ō) *n.* [A.S. *calu*, bald.] A newly hatched worker ant. *a.* Unfledged.

**callus** (kâl'ūs) *n.* [L. *callum*, hard skin.] Tissue that forms over cut or damaged plant surface; deposit of callose on sieve-plates; small hard outgrowth at base of spikelet or of floret, in some grasses; a growth of shell-like material within umbilicus of shell; a mesonotal swelling in some insects; *callosity*.

**caloricity** (kälörís'íti) *n.* [L. *calere*, to be warm.] In animals, the power of developing and maintaining a certain degree of heat.

**calorie** (käl'óri) *n.* [L. *calere*, to be warm.] Amount of heat required to raise temperature of one gramme of water one degree centigrade (small calorie); one large calorie equals one thousand small calories.

**calorigenic** (käl'örījē'n'ik) *a.* [L. *calor*, heat; *genere*, to beget.] Promoting oxygen consumption and heat production.

**calotte** (kälöt') *n.* [F. *calotte*, skull-cap.] An outer cell group or polar cap in Dicyemidae, for adhesion to kidney of Cephalopoda; a retractile disc with sensory cilia, in larval Bryozoa.

**caltrop** (käl'tröp) *n.* [A.S. *coltraeppe*, thistle.] A sponge spicule with four rays so disposed that any three being on the ground the fourth projects vertically upwards; also calthrop.

**calvarium** (kälvä'r'iüm) *n.* [L. *calvus*, bald.] The dome of the skull.

**calx** (kälks) *n.* [L. *calx*, lime, heel.] Lime; calcanes, *q.v.*

**calycanthemy** (käl'íkän'thēmi) *n.* [Gk. *kalyx*, calyx; *anthemon*, flower.] Abnormal development of parts of calyx into petals.

**calyces**,—*plu.* of calyx.

**calyciflorous** (käl'isiflō'rūs) *a.* [L. *calyx*, calyx; *flos*, flower.] *Appl.* flowers in which stamens and petals are adnate to the calyx.

**calyciform** (kälis'ifōrm) *a.* [L. *calyx*, calyx; *forma*, shape.] Calyx-like in shape.

**calycine** (käl'isfn) *a.* [L. *calyx*, calyx.] *Pert.* a calyx; cup-like.

**calycle** (käl'íkl) *n.* [L. *calyculus*, little calyx.] An epicalyx; a cup-shaped cavity in a coral; a theca in a hydroid; calyculus; also calicle.

**calyculus** (kälík'ülūs) *n.* [L. *calyculus*, little calyx.] Cup-shaped or bud-shaped structure; calycle.

**calyculus gustatorius**,—a taste-bud

or taste-bulb, an ovoid buccal sense organ composed of gustatory cells supported and surrounded by sustentacular cells.

**calyculus ophthalmicus**,—optic cup, formed by invagination of the optic bulb and developing into the retina.

**calymma**,—*kalymma*, *q.v.*

**calypter** (kälíp'tēr) *n.* [Gk. *kalyptos*, hidden.] Antitegula or modified alula covering haltere in certain Diptera; calyptron.

**calyptoblastic** (kälíp'töbläs'tik) *a.* [Gk. *kalyptos*, hidden; *blastos*, bud.] *Pert.* hydroids in which gonophore is enclosed in a gonotheca.

**calyptobranchiate** (kälíp'töbräng'-kiāt) *a.* [Gk. *kalyptos*, hidden; *branchia*, gills.] With gills not visible from exterior.

**calyptopsis** (kälíptöp'sis) *n.* [Gk. *kalyptos*, hidden; *opsis*, sight.] A larva with short-stalked eyes, as of some arthropods.

**calyptra** (kälíp'trä) *n.* [Gk. *kalyptra*, covering.] Tissue enclosing developing sporogonium in liverworts; remains of archegonium which surround apex of capsule in mosses; neck of archegonium in prothallus of some pteridophytes; root-cap; *cf.* calyptrogen.

**calyptrate** (kälíp'trát) *a.* [Gk. *kalyptra*, covering.] *Appl.* caducous calyx separating from its lower portion or from thalamus; operculate; *appl.* Diptera with halteres hidden by squamae.

**calyptrogen** (kälíp'trōjēn) *n.* [Gk. *kalyptra*, covering; *gennaïn*, to produce.] The special layer of cells lying at apex of growing root and giving origin to root-cap.

**calyptron** (kälíp'trōn) *n.* [Gk. *kalyptra*, covering.] The squama of Calypterae; calypter.

**calyx** (käl'íks) *n.* [Gk. *kalyx*, calyx.] The outer whorl of floral leaves; cup-like portion of pelvis of kidney; theca of certain hydroids; cup-like body of crinoids; cup or head of pedunculate bodies in insects.



**cambial** (kām'biāl) *a.* [L. *cambium*, change.] *Pert.* cambium.

**cambiform** (kām'bifōrm) *a.* [L. *cambium*, change; *forma*, shape.] Similar to cambium cells.

**cambiogenetic** (kām'brōjēnēt'ik) *a.* [L. *cambium*, change; Gk. *genesis*, origin.] *Appl.* cells which produce cambium.

**cambium** (kām'biūm) *n.* [L. *cambium*, change.] The tissue from which secondary growth arises in stems and roots.

**Cambrian** (kām'brīān) *a.* [L. *Cambria*, Wales.] *Pert.* earliest period, or system of rocks, of Palaeozoic era.

**cameration** (kāmērā'shūn) *n.* [L. *cameratio*, vaulting.] Division into a large number of separate chambers.

**camerostome** (kām'erōstōm') *n.* [L. *camera*, chamber; Gk. *stoma*, mouth.] Hollowed-out under surface of 'hood' of certain Trogulidae.

**campaniform** (kāmpān'ifōrm) *a.* [L.L. *campana*, bell; *forma*, shape.] Bell- or dome-shaped; *appl.* sensilla.

**campanula Halleri** [*Dim.* of L.L. *campana*, bell; *A. von Haller*, Swiss anatomist]. Expansion of falciform process at lens in many fishes.

**campanulate** (kānpān'ulāt) *a.* [*Dim.* of L.L. *campana*, bell.] Bell-shaped; *appl.* corolla.

**campodeiform** (kāmpō'dēlfōrm) *a.* [Gk. *kampe*, caterpillar; *eidos*, form; L. *forma*, shape.] *Appl.* larva resembling a Campodea; thysanuriform.

**camptodrome** (kāmp'tōdrōm) *a.* [Gk. *kamptos*, flexible; *dromos*, course.] *Pert.* leaf venation in which secondary veins bend forward and anastomose before reaching margin.

**camptotrichia** (kāmp'tōtrikyā) *n. plu.* [Gk. *kamptos*, flexible; *thrix*, hair.] Jointed dermal fin-rays in certain primitive fishes.

**canolosperruous** (kāmplōspēr'mūs) *a.* [Gk. *kampylos*, curved;

*sperma*, seed.] *Appl.* seeds with groove along inner face.

**campylotropous** (kām'pilōt'rōpūs) *a.* [Gk. *kampylos*, curved; *trope*, turning.] *Pert.* ovules in which nucellus and embryo-sac are bent so that micropyle points almost back to placenta.

**canalicular** (kānālik'ulār) *a.* [L. *canaliculus*, small channel.] *Pert.* canals, or canaliculi.

**canalicular apparatus**,—the Golgi bodies, regarded as a system of canals.

**canaliculus** (kānālik'ulūs) *n.* [L. *canaliculus*, small channel.] One of the small canals containing cell-processes of bone-corpuscles and connecting lacunae in Haversian system; small channel for passage of nerves through various bones.

**canaliform** (kānāl'ifōrm) *a.* [L. *canalis*, canal; *forma*, shape.] Canal-like.

**cancellous** (kān'sēlūs) *a.* [L. *cancellus*, chambered.] Consisting of slender fibres and lamellae, which join to form a reticular structure; cancellated; *appl.* inner, more spongy, portion of bony tissue; *appl.* anterior portion of cuttle-bone.

**cancrisocial** (kāng'krīsō'shāl) *a.* [L. *cancer*, crab; *socius*, ally.] *Appl.* commensals with crabs.

**canine** (kānīn', kā'nīn) *n.* [L. *canis*, dog.] The tooth next to incisors. *a. Pert.* canine tooth, or to a fossa and eminence on anterior surface of maxilla.

**caninus** (kānī'nūs) *n.* [L. *caninus*, canine.] Muscle from canine fossa to angle of mouth; levator anguli oris.

**cannon bone**,—bone supporting limb from hock to fetlock, enlarged and fused metacarpals or metatarsals; in birds, the tarsometatarsus.

**canopy** (kān'ōpt) *n.* [Gk. *konopeon*, curtained bed.] Topmost layer of leaves, twigs, and branches of forest trees, or of other woody plants.

**cantharidin** (kānthār'idin) *n.* [*Cantharidae*, blister-beetles, from Gk. *kāntharos*.] Poison from accessory glands of genital tract and blood of blister-beetles;  $C_{10}H_{12}O_4$ .

**canthus** (kān'thūs) *n.* [Gk. *kānthos*, corner of eye.] The angle where upper and lower eyelids meet; commissura palpebrarum.

**capillary** (kāpil'ārī) *a.* [L. *capillus*, hair.] Hair-like; *appl.* moisture held between and around particles of soil. *n.* One of minute thin-walled vessels which form networks in various parts of body, *e.g.* blood, lymph, or biliary capillaries.

**capillitium** (kāp'ilīt'iūm, kāp'ilish'iūm) *n.* [L. *capillus*, hair.] A protoplasmic network of elaters or filaments embedding spores within sporangia of certain fungi.

**capitate** (kāp'itāt) *a.* [L. *caput*, head.] Enlarged or swollen at tip; gathered into a mass at apex, as compound stigma, some inflorescences; *appl.* a bone, os capitatum.

**capitatum** (kāpītā'tūm) *n.* [L. *caput*, head.] The third carpale; os magnum.

**capitellum** (kāp'itēl'ūm) *n.* [*Dim.* of L. *caput*, head.] A capitulum or articular protuberance at end of a bone.

**capitulum** (kāpīt'ulūm) *n.* [L. *caput*, head.] A knob-like swelling at end of a bone, *e.g.* on humerus for articulation with radius; part of cirripede body enclosed in mantle, *opp.* peduncle; swollen end of hair or tentacle; enlarged end of insect proboscis, or antenna; exsert part of head in ticks; part of column above parapet in sea-anemones; spherical cell at inner end of manubrium in Characeae; head or anthodium, an inflorescence of sessile flowers or florets crowded together on a receptacle and usually surrounded by an involucre.

**capreolate** (kāprē'ōlāt, kāp'rēōlāt) *a.* [L. *capreolus*, tendril.] Supplied with tendrils; tendril-shaped.

**caprification** (kāp'rīfīkā'shūn) *n.* [L.

*caprificus*, wild fig-tree.] Pollination of flowers of fig-tree by Chalcid insects.

**capsule** (kāp'sūl) *n.* [L. *capsula*, little box.] A sac-like membrane enclosing an organ; thickened slime layer surrounding certain bacteria; any closed box-like vessel containing spores, seeds, or fruits; sporogonium, in Bryophyta; a superior, one or more celled, many-seeded, dehiscent fruit; membrane surrounding nerve-cells of sympathetic ganglia.

**capsuliferous** (kāp'sūlif'ērūs) *a.* [L. *capsula*, little box; *ferre*, to carry.] With, or forming, a capsule; capsuligerous, capsulogenous.

**captacula** (kāptāk'ulā) *n. plu.* [L. *captare*, to lie in wait for.] Exsertile filamentous tactile organs near mouth of Scaphopoda.

**caput** (kāp'ūt) *n.* [L. *caput*, head.] Head; knob-like swelling at apex; peridium of certain fungi.

**caput caecum coli**,—former name of caecum.

**carapace** (kā'rāpās) *n.* [Sp. *carapacho*, covering.] A chitinous or bony shield covering whole or part of back of certain animals.

**carbohydrates** (kārbōhī'drāts) *n. plu.* [L. *carbo*, coal; Gk. *hydor*, water.] Compounds of carbon, hydrogen, and oxygen, aldehydes or ketones constituting sugars, or condensation products thereof.

**carbon dioxide** (kārbōn diōk'sīd) *n.* [L. *carbo*, coal; Gk. *di-*, two; *oxys*, sharp.] Carbonic acid gas, a heavy, colourless gas present in the atmosphere, assimilated by plants and produced by decomposition of organic substances;  $CO_2$ .

**Carboniferous** (kārbōnif'ērūs) *a.* [L. *carbo*, coal; *ferre*, to carry.] *Peri.* period of late Palaeozoic era including formation of coal measures.

**carcerule** (kā'r'sērūl) *n.* [L. *carcer*, prison.] A superior, dry, many-celled fruit, with indehiscent one- or few-seeded carpels cohering by united styles to a central axis.

**carcinology** (kâr'sínôl'ôji) *n.* [Gk. *karkinos*, crab; *logos*, discourse.] The study of Crustacea.

**cardia** (kâr'diâ) *n.* [Gk. *kardia*, stomach.] The opening between oesophagus and stomach.

**cardiac** (kâr'diâk) *a.* [Gk. *kardiakos*, *pert.* heart, stomach.] *Pert.*, near, or supplying heart; *appl.* cycle, etc.; *pert.* anterior part of stomach.

**cardiac impulse**,—motion caused by rapid increase in tension of ventricle.

**cardinal** (kâr'dinâl) *a.* [L. *cardo*, hinge.] *Pert.* that upon which something depends or hinges; *pert.* hinge of bivalve shell, or to cardo of insects; *appl.* points for plant growth: minimum, optimum, and maximum temperatures or temperature ranges.

**cardinal sinuses and veins**,—veins uniting in Cuvier's duct, persistent in most fishes, embryonic in other vertebrates.

**cardioblast** (kâr'diôblâst) *n.* [Gk. *kardia*, heart; *blastos*, bud.] One of embryonic cells destined to form walls of heart.

**cardiobranchial** (kâr'diôbrâng'kiâl) *a.* [Gk. *kardia*, heart; *brangchia*, gills.] *Appl.* enlarged posterior basibranchial cartilage ventral to heart in elasmobranchs.

**cardo** (kâr'dô) *n.* [L. *cardo*, hinge.] The hinge of a bivalve shell; basal sclerite of maxilla in insects, itself divided into eucardo and paracardo.

**carina** (kâr'i'nâ, kâr'ê'nâ) *n.* [L. *carina*, keel.] A keel-like ridge on certain bones, as breast-bone of birds; median dorsal plate of a barnacle; the two coherent anterior petals of a leguminous flower; ridge on bracts of certain grasses.

**carinal** (kâr'i'nâl) *a.* [L. *carina*, keel.] Like or *pert.* a keel or ridge; *appl.* median strand of xylem passing from stem to leaf; *appl.* canals in protoxylem beneath ridges of stem in Equisetales; *appl.* dots or puncta on keel of diatom valves.

**carinate** (kâr'inât) *a.* [L. *carina*, keel.] Having a ridge or keel.

**cariniform** (kâr'în'îfôrm) *a.* [L. *carina*, keel; *forma*, shape.] Keel-shaped.

**carnassial** (kârnâs'iâl) *a.* [L. *caro*, flesh.] *Pert.* cutting teeth of Carnivora, fourth premolar above and first molar below,—in upper the protocone is reduced, in lower the metaconid.

**carnivorous** (kârniv'ôrus) *a.* [L. *caro*, flesh; *vorare*, to devour.] Flesh-eating; *appl.* Carnivora, and to certain plants which feed on entrapped insects.

**carotenase** (kâr'ôtênâs) *n.* [L. *carota*, carrot.] A liver enzyme which activates vitamin A formation from carotenes.

**carotene** (kâr'ôtên) *n.* [L. *carota*, carrot.] A yellow pigment synthesised by plants and present in milk, liver oils, egg yolk, etc.; provitamin A;  $C_{40}H_{56}$ .

**carotenoids** (kâr'ôtênoidz) *n. plu.* [L. *carota*, carrot; Gk. *eidos*, form.] Pigments occurring in plants and some animal tissues, and including carotene, xanthophylls, and other fat-soluble pigments.

**carotid** (kârôt'id) *a.* [Gk. *karos*, heavy sleep.] *Pert.* chief arteries in the neck; *appl.* arch, ganglion, nerve, etc.

**carotid bodies**,—two small masses of chromaffin cells associated with carotid sinus, and being part of system for controlling oxygen content and acidity of blood; glomera carotica.

**carotin**,—carotene, *q.v.*

**carotinoids**,—carotenoids, *q.v.*

**carpal** (kâr'pâl) *n.* [L. *carpus*, wrist.] A wrist bone. *a. Pert.* wrist.

**carpel** (kâr'pêl) *n.* [Gk. *karpós*, fruit.] A division of the seed-vessel; a simple pistil. *Plu.* Sporophylls which carry megasporangia; megasporophylls.

**carpocerite** (kâr'pôsêrit) *n.* [L. *carpus*, wrist; Gk. *keras*, horn.] Fifth antennal joint in certain Crustacea.

**carpogenic** (kârpöjën'ik) *a.* [Gk. *karpōs*, fruit; *gennaein*, to produce.] *Appl.* those cells in red algae which form the carpogonium; *appl.* cell: oogonium of archicarp; carpo-

**carpogonium** (kâr'pögō'nīum) *n.* [Gk. *karpōs*, fruit; *gonos*, birth.] Lower portion of procarp, which contains female nucleus, in some thallophytes; female gametangium in red algae.

**carpolith** (kâr'pölith) *n.* [Gk. *karpōs*, fruit; *lithos*, stone.] A fossil fruit.

**carpometacarpus** (kâr'pömētākâr'pūs) *n.* [Gk. *karpōs*, wrist; *meta*, after.] Portion of wing skeleton formed by fusion of carpal and metacarpal bones, in birds.

**carpophagous** (kârpöf'ägūs) *a.* [Gk. *karpōs*, fruit; *phagein*, to eat.] Feeding on fruit.

**carpophore** (kâr'pöfōr) *n.* [Gk. *karpōs*, fruit; *pherein*, to bear.] Part of flower axis to which carpels are attached; stalk of sporocarp.

**carpophyte** (kâr'pöfit) *n.* [Gk. *karpōs*, fruit; *phyton*, plant.] A thallophyte which forms sporocarp.

**carpopodite** (kâr'pöpödīt) *n.* [L. *carpus*, wrist; Gk. *pous*, foot.] The third joint of endopodite in certain Crustacea; patella in spiders.

**carposperm** (kâr'pöspērm) *n.* [Gk. *karpōs*, fruit; *sperma*, seed.] The fertilised oosphere in certain Thallophyta.

**carposporangium** (kâr'pöspörän'jīum) *n.* [Gk. *karpōs*, fruit; *sporos*, seed; *angeion*, vessel.] The terminal cells of filaments developed from fertilised carpogonium in some Thallophyta.

**carpospore** (kâr'pöspōr) *n.* [Gk. *karpōs*, fruit; *sporos*, seed.] A spore of those formed at end of filaments developed from carpogonium.

**carposporophyte** (kâr'pöspōrō'fīt) *n.* [Gk. *karpōs*, fruit; *sporos*, seed; *phyton*, plant.] The diploid generation of red algae, which consists of filaments forming carpospores at their apices.

**carpus** (kâr'pūs) *n.* [L. *carpus*, wrist.]

The wrist; region of fore-limb between forearm and metacarpus.

**cartilage** (kâr'tilēj) *n.* [L. *cartilago*, cartilage.] Gristle, a translucent, bluish-white tissue, firm and elastic, found generally in connection with bones; cartilaginous structure.

**caruncle** (kâr'ring'kl) *n.* [L. *caruncula*, small piece of flesh.] A naked, fleshy excrescence; small conical body at inner junction of upper and lower eyelids, caruncula lacrimalis; a fleshy outgrowth on head of certain birds, and on certain caterpillars; a little horny elevation at end of beak of embryo chicks; piston-like structure within acetabulum of dibranchiate Cephalopoda; sucking-disc on tarsi of certain mites; one of outgrowths from various regions of testa of a seed, a strophiole.

**caryo-**,—also *karyo-*, *q.v.*

**caryolite** (kâr'jölīt) *n.* [Gk. *karyon*, nut; *lytikos*, loosing.] A nucleated muscle fragment undergoing phagocytosis in development of insects.

**caryopsis** (kâr'jöp'sis) *n.* [Gk. *karyon*, nut; *opsis*, appearance.] A superior, one-celled, one-seeded, indehiscent fruit with a thin dry membranous pericarp inseparably united with the seed; grain.

**casein** (kā'sein) *n.* [L. *caseus*, cheese.] A phosphoprotein of milk, formed from caseinogen (casein in U.S.A.) by action of rennet; paracasein (U.S.A.)

**Casparian band** [*R. Caspary*, German botanist.] A cork- or wood-like strip encircling radial walls of endodermis cells.

**cassideous** (käs'id'ēūs) *a.* [L. *cassis*, helmet.] Helmet-like.

**caste** (kâst) *n.* [L. *castus*, pure.] One of the distinct forms found among certain social insects.

**castrate** (kâs'trät) *a.* [L. *castrare*, to castrate.] *Pert.* flowers from which androecium has been removed. *n.* An animal deprived of functional gonads. *v.* To deprive of testes; to gonadectomise; to inhibit development of gonads.

**cata-**,—also *kata-*, *q.v.*

**catadromous** (kātād'rōmūs) *a.* [Gk. *kata*, down; *dromēin*, to run.] Tending downward; having branches arising from lower side of pinnae, in ferns; having first set of nerves in a frond segment given off on basal side of midrib; *appl.* fishes which migrate from fresh to salt water annually, *opp.* anadromous.

**catalase**,—an enzyme occurring in plant and animal tissues, which decomposes hydrogen peroxide into water and oxygen.

**catalepsis** (kātālēp'sis) *n.* [Gk. *katalepsis*, seizure.] A so-called shamming - dead reflex, as in spiders; *cf.* kataplexy.

**catalysis** (kātāl'isis) *n.* [Gk. *katalysis*, dissolving.] Acceleration or retardation of reaction due to presence of a catalyst.

**catalyst** (kāt'ālist) *n.* [Gk. *katalysis*, dissolving.] An agent, *e.g.* an enzyme, which can accelerate or retard, or initiate, a reaction and apparently remains unchanged; *catalysor*.

**cataphoresis** (kāt'āfōrē'sis) *n.* [Gk. *katapherein*, to carry down.] Migration of particles in suspension, as of living cells, under influence of electric current, the rate depending on voltage; *electrophoresis*.

**cataphyll** (kāt'āfil) *n.* [Gk. *kata*, down; *phyllon*, leaf.] Simple form of leaf on lower part of plant, as cotyledon, bud-scale, scale-leaf; *cataphyllary* leaf. *Opp.* *hypso-phyll*.

**cataphyllary** (kāt'āfil'ārī) *a.* [Gk. *kata*, down; *phyllon*, leaf.] *Appl.* rudimentary or scale-like leaves which act as covering of buds.

**catapleurite** (kāt'aploor'it) *n.* [Gk. *kata*, down; *pleura*, side.] Thoracic pleurite between anapleurite and trochantin, as in certain Thysanura; *coxopleurite*.

**catelectrotonus** (kātēlēk'trōt'ōnūs, kāt'ēlēktrōt'ōnūs) *n.* [Gk. *kata*, down; *elektron*, amber; *tonos*, tension.] Increase in irritability of a

nerve under influence of non-polarising electric current; *katelectrotonus*.

**catena** (kātē'nā) *n.* [L. *catena*, chain.] A sequence of soil types which is repeated in a corresponding sequence of topographical sites, as between ridges and valleys of a region.

**catenation** (kātēnā'shūn) *n.* [L. *catenatus*, chained.] End-to-end arrangement of chromosomes; ring formation of alternating paternally and maternally derived chromosomes; a chain, as of diatom frustules.

**catenoid** (kātē'noid) *a.* [L. *catena*, chain; Gk. *eidos*, form.] Chain-like; *appl.* certain protozoan colonies.

**catenular** (kātēn'ulār), **catenulate** (kātēn'ulāt) *a.* [L. *catena*, chain.] Chain-like; *appl.* colonies of bacteria, colour-markings on butterfly wings, shells, etc.

**caterpillar** (kāt'erpil'ār) *n.* [L.L. *cattus*, cat; L. *pilosus*, hairy.] Young worm-like insect larva, particularly of Lepidoptera; *eruca*.

**cathammal** (kāth'āmāl) *a.* [Gk. *kathamma*, anything tied.] *Appl.* plates forming endoderm lamella in some Coelenterata.

**catkin** (kāt'kin) *n.* [A.S. *catkin*, little cat.] A spike with unisexual flowers and pendulous rachis; *amentum*.

**cauda** (kō'dā) *n.* [L. *cauda*, tail.] A tail, or tail-like appendage; posterior part of an organ, *e.g.* cauda equina, cauda epididymis; a tube at posterior end of abdomen of certain insects, suggesting presence of a further segment.

**caudad** (kō'dād) *adv.* [L. *cauda*, tail; *ad*, toward.] Towards tail region or posterior end.

**caudal** (kō'dāl) *a.* [L. *cauda*, tail.] Of or *pert.* a tail, *e.g.* caudal fin.

**caudate** (kō'dāt) *a.* [L. *cauda*, tail.] Having a tail, *e.g.* caudate nucleus; *appl.* a lobe of the liver.

**caudatolenticular** (kōdā'tōlēntik'ulār) *a.* [L. *cauda*, tail; *lens*, lentil.] *Appl.* caudate and lenticular nuclei of corpus striatum.

**caudex** (kô'dêks) *n.* [L. *caudex*, dry stump.] The axis or stem of a woody plant, as of tree-ferns, palms, etc.

**caudicle** (kô'dīkl) *n.* [Dim. of L. *cauda*, tail] Stalk of pollinium in orchids.

**caudihæmal** (kô'dihē'māl) *a.* [L. *cauda*, tail; Gk. *haima*, blood.] *Appl.* posterior lower portion of a sclerotome.

**caudineural** (kô'dīnū'rāl) *a.* [L. *cauda*, tail; Gk. *neuron*, nerve.] *Appl.* posterior upper portion of a sclerotome.

**caudostyle** (kô'döstīl) *n.* [L. *cauda*, tail; Gk. *stylos*, column.] A terminal structure in certain parasitic amoebæ.

**caul** (kôl) *n.* [M.E. *calle*, covering.] An enclosing membrane; amnion; omentum.

**caulescent** (kôlēs'ēnt) *a.* [L. *caulis*, stalk.] With leaf-bearing stem above ground.

**caulicolous** (kôlik'ôlūs) *a.* [I. *caulis*, stalk; *colere*, to inhabit.] *Appl.* fungi growing on plant-stems.

**cauliflory** (kôl'iflō'rī) *n.* [L. *caulis*, stalk; *flos*, flower.] Condition of having flowers arising from axillary buds on main stem or older branches; cauliflorous habitus.

**cauliform** (kôl'ifôrm) *a.* [I. *caulis*, stalk; *forma*, shape.] Stem-like.

**cauligenous** (kôlij'ēnūs) *a.* [Gk. *kaulos*, stem; *genos*, birth.] Borne on the stem.

**cauline** (kô'lfīn) *a.* [I. *caulis*, stalk.] *Pert.* stem; *appl.* leaves growing on upper portion of a stem; *appl.* vascular bundles not passing into leaves.

**caulis** (kô'lis) *n.* [L. *caulis*, stalk.] The stem, in herbaceous plants.

**caulocaline** (kôl'ôkālēn') *n.* [Gk. *kaulos*, stem; *kalein*, to summon.] A plant hormone, possibly elaborated in roots, which stimulates growth of stem.

**caulocarpous** (kô'lôkâr'pūs) *a.* [Gk. *kaulos*, stem; *karpos*, fruit.] With fruit-bearing stem.

**caulocystidium** (kôl'ôsistīd'īūm) *n.*

[Gk. *kaulos*, stalk; *kystis*, bag; *idion*, dim.] One of the cystidium-like structures on stipe of certain Basidiomycetes.

**caulome** (kô'lôm) *n.* [Gk. *kaulos*, stem.] The stem structure of a plant as a whole.

**cavernosus** (kāv'ernō'sūs) *a.* [L. *cavernosus*, chambered.] Full of cavities; hollow, or resembling a hollow; *appl.* tissue, nerve, arteries.

**cavicorn** (kāv'ikôrn) *a.* [L. *cavus*, hollow; *cornu*, horn.] Hollow-horned; *appl.* certain ruminants.

**cavum** (kāv'vūm) *n.* [L. *cavus*, hollow.] The lower division of concha caused by origin of helix; cavity of mouth, larynx, long bones, etc.; any hollow or chamber.

**cecal**,—caecal, *q.v.*

**cecum**,—caecum, *q.v.*

**celiac**,—coeliac, *q.v.*

**cell** (sēl) *n.* [L. *cella*, compartment.] A small cavity or hollow; a locus; a unit mass of protoplasm, usually containing a nucleus or nuclear material; originally, the cell wall; space between veins of insect wings.

**cellifugal** (sēlif'ūgāl) *a.* [L. *cella*, cell; *fugere*, to flee.] Moving away from a cell.

**cellipetal** (sēlip'êtāl) *a.* [L. *cella*, cell; *petere*, to seek.] Moving towards a cell.

**cell lineage**,—the derivation of a tissue or part from a definite blastomere of embryo.

**cell organ**,—a part of a cell having a special function, as a centrosome; organoid.

**cell plate**,—equatorial thickening of spindle fibres from which partition wall arises during division of plant cells.

**cell sap**,—the more fluid ground substance of the cell.

**cellular** (sēl'ulār) *a.* [L. *cellula*, small cell.] *Pert.* or consisting of cells.

**cellulase** (sēl'ulās) *n.* [L. *cellula*, small cell.] An enzyme which hydrolyses cellulose, occurring in bacteria and fungi.

**cellulin** (sêl'ûlin) *n.* [L. *cellula*, little cell.] A carbohydrate found in constrictions of hyphae.

**cellulose** (sêl'ûlôs) *n.* [L. *cellula*, small cell.] A carbohydrate forming main part of plant cell walls; also found in tests of tunicates; ( $C_6H_{10}O_5$ )<sub>*x*</sub>.

**cell-wall**,—investing portion of cell.

**celo**,—coelo-, *q.v.*

**cement** (sêmênt') *n.* [L. *caementum*, mortar.] A substance chemically and physically allied to bone, investing parts of teeth; crusta petrosa; a uniting substance secreted by certain animals.

**cenchrus** (sêng'krûs) *n.* [Gk. *kengchros*, millet.] A pale-coloured area on mesothorax of saw-flies.

**ceno**,—see caeno-, coeno-

**censer mechanism**,—method of seed distribution by which seeds are jerked out from fruit by high wind.

**centradenia** (sên'trädē'niä) *n.* [Gk. *kentron*, centre; *aden*, gland.] The type of siphonophore colony in Disconectae.

**central** (sên'träl) *a.* [L. *centrum*, centre.] Situated in the centre; *pert.* a vertebral centrum. *n.* A bone in wrist or ankle, situated between proximal and distal rows.

**central body**,—centrosome, *q.v.*

**central cylinder**,—stele, *q.v.*

**centric** (sên'trik) *a.* [L. *centrum*, centre.] *Appl.* leaves which are cylindrical or terete; having a centromere.

**centrifugal** (sêntrif'ügäl) *a.* [L. *centrum*, centre; *fugere*, to flee.] *Appl.* compact cymose inflorescences having youngest flowers towards outside; *appl.* nerves transmitting impressions from nerve centre to parts supplied by nerve.

**centriole** (sên'triöl) *n.* [L. *centrum*, centre.] The central particle of the centrosome; the centrosome itself.

**centripetal** (sêntríp'êtäl) *a.* [L. *centrum*, centre; *petere*, to seek.] *Appl.* racemose inflorescences having youngest flowers at apex; *appl.* nerves transmitting impres-

sions from peripheral extremities to nerve centres.

**centripetal canals**,—blind canals growing from circular canal backwards towards apex of bell in certain Trachomedusae.

**centro-acinar** (sên'trôäs'inär) *a.* [L. *centrum*, centre; *acinus*, berry.] *Pert.* centre of an alveolus, as in pancreas.

**centrodesmose** (sên'trödës'môs), **centrodesmus** (sên'trödës'mûs) *n.* [Gk. *kentron*, centre; *desmos*, bond.] The fibril or system of fibrils temporarily connecting two centrosomes; also centrodesm.

**centrodorsal** (sên'trödôr'säl) *a.* [L. *centrum*, centre; *dorsum*, back.] *Appl.* plate in middle of aboral surface of unstalked crinoids.

**centrogenous** (sêntrôj'ênûs) *a.* [Gk. *kentron*, centre; *gennaein*, to produce.] *Appl.* a skeleton of spicules which meet in a common centre and grow outwards.

**centrolecithal** (sên'trölës'ithäl) *a.* [Gk. *kentron*, centre; *lekithos*, yolk.] With yolk aggregated in the centre, *appl.* ovum.

**centromere** (sên'trômêr) *n.* [Gk. *kentron*, centre; *meros*, part.] The part of the chromosome located at the point lying on the equator of the spindle at metaphase and dividing at anaphase, controlling chromosome activity; spindle-attachment region, achromere, kinetochore.

**centron** (sên'trôn) *n.* [Gk. *kentron*, centre.] Cyton, *q.v.*

**centrophormium** (sên'trôfôr'miûm) *n.* [Gk. *kentron*, centre; *phormis*, small basket.] The Golgi-bodies when in round basket-like form.

**centroplasm** (sên'trôpläzm) *n.* [Gk. *kentron*, centre; *plasma*, mould.] Substance of centrosphere; a more or less definite concentric zone round the aster in mitosis.

**centroplast** (sên'trôpläst) *n.* [Gk. *kentron*, centre; *plastos*, formed.] An extranuclear spherical body forming division centre of mitosis in certain lower organisms.

**centrosome** (sĕn'trōsōm) *n.* [Gk. *kentron*, centre; *soma*, body.] A cell-organ, the centre of dynamic activity in mitosis, consisting of centriole and attraction-sphere.

**centrosphere** (sĕn'trōsfēr) *n.* [Gk. *kentron*, centre; *sphaira*, ball.] The central mass of aster and centrosome; astrosphere; attraction-sphere.

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**cephal-**,—also *kephal-*.

**cephalad** (kĕf'ālād, sĕf-) *adv.* [Gk. *kephale*, head; L. *ad*, towards.] Towards head region or anterior end.

**cephalanthium** (kĕf'ālānthiūm, sĕf-) *n.* [Gk. *kephale*, head; *anthos*, flower.] The capitulum in composite plants; anthodium.

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**cephalic** (kĕfāl'īk, sĕf-) *a.* [Gk. *kephale*, head.] *Pert.* head; in head region.

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of anterior end in animal development.

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**cespitose**, —caespitose, *q.v.*

**cetolith** (sē'tōlith) *n.* [Gk. *ketos*, whale; *lithos*, stone.] The fused tympanic and petrosal of whales, found in deep-sea dredging.

**cevitamic acid**,—ascorbic acid or vitamin C.

**chaeta** (kē'tā) *n.* [Gk. *chaite*, hair.] A seta (*q.v.*), or bristle, as of certain worms.

**chaetic** (kē'tik) *a.* [Gk. *chaite*, hair.] Bristle-like, *appl.* a type of tactile sensilla in insects.

**chaetiferous** (kētif'ērūs) *a.* [Gk. *chaite*, hair; L. *ferre*, to bear.] Bristle-bearing; chaetigerous, setigerous.

**chaetophorous** (kētōi'ōrūs) *a.* [Gk. *chaite*, hair; *pherein*, to bear.] Bristle-bearing; *appl.* worms and certain insects.

**chaetosema** (kē'tōsē'mā) *n.* [Gk. *chaite*, hair; *sema*, sign.] One of two small sensory organs located on head of certain Lepidoptera, and provided with bristles and sensory cells connected by a sheathed nerve to brain; Jordan's organ.

**chaetotaxy** (kē'tōtāk'sī) *n.* [Gk. *chaite*, hair; *taxis*, arrangement.] Bristle pattern or arrangement.

**chain behaviour**,—a series of actions, each being induced by the antecedent action and being an integral part of a unified performance.

**chalaza** (kālā'zā) *n.* [Gk. *chalaza*, hail.] One of two spiral bands attaching yolk to membrane of a bird's egg; base of nucellus of ovule, from which integuments arise.

**chalaziferous** (kālāzif'ērūs) *a.* [Gk. *chalaza*, hail; L. *ferre*, to bear.] *Appl.* layer of albumen surrounding yolk and continuous with chalazae.

**chalazogamy** (kālāzōg'āmī) *n.* [Gk. *chalaza*, hail; *gamos*, marriage.] Fertilisation in which the pollen-tube pierces chalaza of ovule; *cf.* porogamy.

**chalice** (chāl'is) *n.* [L. *calix*, goblet.] *Appl.* simple gland cells or goblet cells; a modified columnar epithe-

lial gland cell; arms and disc of a crinoid.

**chalones** (kāl'ōnz) *n. plu.* [Gk. *chalinōs*, curb.] Internal secretions which depress activity; *opp.* hormones.

**chalconic** (kālōn'ik) *a.* [Gk. *chalinōs*, curb.] Depressor, inhibitory, or restraining; *appl.* internal secretions; *opp.* hormonal.

**chamaephyte** (kāmi'fit) *n.* [Gk. *chamai*, on the ground; *phyton*, plant.] A plant with shoots that bear dormant buds lying on or near the ground.

**chasmatoplasm** (kāz'mātōplāzm) *n.* [Gk. *chasma*, expanse; *plasma*, mould.] An expanded form of plasmion.

**chasmochomophyte** (kāz'mōkō'mōfit) *n.* [Gk. *chasma*, opening; *choma*, mound; *phyton*, plant.] A plant growing on detritus in rock crevices.

**chasmogamy** (kāzmōg'āmī) *n.* [Gk. *chasma*, opening; *gamos*, marriage.] Opening of a mature flower to ensure fertilisation, *opp.* cleistogamy.

**chasmophyte** (kāz'mōfit) *n.* [Gk. *chasma*, opening; *phyton*, plant.] A plant which grows in crevices of rocks; a chasmophilous plant.

**cheek** (chēk) *n.* [A.S. *céace*, cheek.] The fleshy wall of mouth in mammals; side of face; in invertebrates the lateral portions of head, as fixed and free cheeks of trilobites.

**cheilocystidium** (kī'lōsistīd'fūm) *n.* [Gk. *cheilos*, edge; *kystis*, bag; *idion*, dim.] A cystidium in hymenium at edge of lamella; *cf.* pleurocystidium.

**cheiapterygium** (kīrōptērtj'fūm) *n.* [Gk. *cheir*, hand; *pteryx*, wing.] The pentadactyl limb typical of higher vertebrates.

**chela** (kē'lā) *n.* [Gk. *chele*, claw.] The claw borne on certain limbs of Crustacea and Arachnoidea; a short sponge spicule with talon-like projections at one or each end.

**chelate** (kē'lāt) *a.* [Gk. *chele*, claw.] Claw-like or pincer-like; cheliform; cheliferous, *q.v.*

**chelicerae** (kēlīs'ērē) *n. plu.* [Gk. *chele*, claw; *keras*, horn.] Anterior chelate or sub-chelate appendages of Arachnoidea; also cheliceræ.

**cheliferous** (kēlīf'ērūs) *a.* [Gk. *chele*, claw; *L. ferre*, to bear.] Supplied with chelae or claws.

**cheliform** (kē'līfōrm) *a.* [Gk. *chele*, claw; *L. forma*, shape.] Claw-like; *appl.* appendages.

**cheliped** (kē'līpēd) *n.* [Gk. *chele*, claw; *L. pes*, foot.] A claw-bearing appendage; forceps of decapod crustaceans.

**chelophores** (kē'lōfōrz) *n. plu.* [Gk. *chele*, claw; *pherein*, to bear.] First pair of appendages in Pycnogonida.

**chemiluminescence** (kēm'ilūminēs'ens, -loo-) *n.* [Gk. *chemeia*, transmutation; *L. luminescere*, to grow light.] Light production at ordinary temperature during a chemical reaction, as bioluminescence, *q.v.*

**chemonasty** (kēm'ōnās'tī) *n.* [Gk. *chemeia*, transmutation; *nastos*, close pressed.] Response to diffuse or indirect chemical stimuli.

**chemoreceptor** (kēm'ōrēsēp'tōr) *n.* [Gk. *chemeia*, transmutation; *L. recipere*, to receive.] A terminal organ receiving chemical stimuli.

**chemoreflex** (kēm'orē'flēks) *n.* [Gk. *chemeia*, transmutation; *L. re-flectere*, to bend back.] A reflex caused by chemical stimulus.

**chemosynthesis** (kēm'ōsīn'thēsis) *n.* [Gk. *chemeia*, transmutation; *syn*, with; *tithenai*, to place.] The building up of chemical compounds in organisms.

**chemotaxis** (kēm'ōtāk'sīs) *n.* [Gk. *chemeia*, transmutation; *taxis*, arrangement.] The reaction of cells or freely motile organisms to chemical stimuli; also chemiotaxis.

**chemotrophic** (kēmōtrōf'ik) *a.* [Gk. *chemeia*, transmutation; *trophē*, nourishment.] Deriving nourishment from certain inorganic substances, *appl.* certain organisms without chlorophyll, as iron bacteria and sulphur bacteria.

**chemotropism** (kēmōt'rōpīzm) *n.* [Gk. *chemeia*, transmutation; *tropē*, turn.] Curvature of a plant or plant organ in response to chemical stimuli.

**chernozem** (chēr'nōzēm, chērnōzyōm) *n.* [Russ. *chernyi*, black; *zemlya*, soil.] Black soil, characteristic of steppe and grass land and formed under continental climatic conditions; blackearth.

**chersophyte** (kēr'sōfit) *n.* [Gk. *chersa*, waste places; *phyton*, plant.] A plant which grows on waste land.

**chestnut soils**,—dark-brown soils of semi-arid steppe-lands, fertile under adequate rainfall or when irrigated.

**cheta**,—chaeta, *q.v.*

**chevron** (shēv'rōn) *a.* [F. *chevron*, rafter, from *L. caper*, goat.] *Appl.* V-shaped bones articulating with ventral surface of spinal column in caudal region of many vertebrates.

**chiasma** (klāz'mā) *n.*, **chiasmata** (klāz'mātā) *plu.* [Gk. *chiasma*, cross.] A decussation of fibres, as optic chiasma; in paired chromatids, an exchange of partners in meiosis.

**chiasmotypy** (klās'mātipī) *n.* [Gk. *chiasma*, cross; *typos*, character.] A form of recombination of chromosome material in synapsis; chiasmotype, *appl.* theory that chiasmata and crossing-over are causally correlated.

**chiastic** (klās'tik) *a.* [Gk. *chastos*, diagonally arranged.] Decussating; crossing; obliquely or at right angles to axis; *pert.* chiasmata.

**chiasmoneural** (klās'tōnūrāl) *a.* [Gk. *chastos*, diagonally arranged; *neuron*, nerve.] *Appl.* certain gastropods in which visceral nerve cords cross and form a figure 8.

**chilaria** (kilā'riā) *n. plu.* [Gk. *cheilos*, lip.] Pair of processes between sixth pair of appendages in *Limulus*.

**chilidium** (kild'id'ium) *n.* [Gk. *cheilos*, lip; *idion*, *dim.*] A shelly plate covering deltidial fissure in dorsal valve of certain Brachiopoda.

**chimaera** (kīmē'rā) *n.* [L. *chimaera*, monster.] A single organism developing from two fused rudiments from different individuals, or composed of tissues of two different genotypes; a mosaic.

**chimonophilous** (kīmōnōf'īlūs) *a.* [Gk. *cheimon*, winter; *philein*, to love.] Thriving or growing during winter.

**chiropterophilous** (kīrōp'tērōf'īlūs) *a.* [Gk. *cheir*, hand; *pteron*, wing; *philos*, loving.] Pollinated by agency of bats.

**chitin** (kī'tīn) *n.* [Gk. *chiton*, tunic.] A nitrogenous carbohydrate derivative forming the skeletal substance in arthropods, also occurring in fungi.

**chitinase** (kī'tīnās) *n.* [Gk. *chiton*, tunic.] An enzyme which hydrolyses chitin, in mould fungi and in digestive juice of snail.

**chlamydate** (klām'idāt) *a.* [Gk. *chlamys*, cloak.] Supplied with a mantle.

**chlamydeous** (klāmīd'ēūs) *a.* [Gk. *chlamys*, cloak.] *Pert.* flower and envelope.

**chlamydospore** (klām'idōspōr) *n.* [Gk. *chlamys*, cloak; *sporos*, seed.] A thick-walled resting spore of certain fungi and protozoa.

**chloragen** (klō'rājēn) *a.* [Gk. *chloros*, sandy yellow; *genos*, descent.] *Appl.* yellow cells found in connection with alimentary canal of annelids; also chloragogen.

**chloragocyte** (klō'rāgōsīt) *n.* [Gk. *chloros*, sandy yellow; *kytos*, hollow.] A chloragogen cell.

**chloragogen**,—chloragen, *q.v.*

**chloragosomes** (klō'rāgōsōms) *n. plu.* [Gk. *chloros*, sandy yellow; *soma*, body.] Yellow or brownish globules formed in chloragogen cells.

**chloranth** (klōrān'thī, klō'rānthī) *n.* [Gk. *chloros*, grass green; *anthos*, flower.] Reversion of floral leaves back to ordinary green leaves.

**chlorenchyma** (klōrēng'kīmā) *n.* [Gk. *chloros*, grass green; *engchyma*, infusion.] Tissues collectively, or stem tissue, or mesophyll, containing chlorophyll.

**chlorocruorin** (klō'rōkroo'ōrīn) *n.* [Gk. *chloros*, grass green; L. *cruor*, blood.] A green respiratory pigment occurring in blood plasma of certain worms.

**chlorofucin** (klō'rōfū'sīn) *n.* [Gk. *chloros*, green; L. *fucus*, seaweed.] Chlorophyll *c*, in diatoms and brown algae; chlorophyll *γ*.

**chlorophane** (klō'rōfān) *n.* [Gk. *chloros*, grass green; *phainein*, to appear.] A green chromophane.

**chlorophore** (klō'rōfōr) *n.* [Gk. *chloros*, grass green; *phora*, carrying.] A chlorophyll granule in Protista.

**chlorophyll** (klō'rōfīll) *n.* [Gk. *chloros*, grass green; *phyllon*, leaf.] The green colouring matter found in plants and in some animals; chlorophyll *a*,  $C_{55}H_{72}O_5N_4Mg$ ; *b*,  $C_{55}H_{70}O_6N_4Mg$ ; *c*, or *γ* or chlorofucin, *q.v.*; *c* formerly *appl.* a mixture of chlorophyll *a* and pheophytin *a*.

**chloroplast** (klō'rōplāst), **chloroplastid** (klō'rōplās'tīd) *n.* [Gk. *chloros*, grass green; *plastos*, moulded.] A minute granule or plastid containing chlorophylls *a* and *b*, found in plant-cells exposed to light.

**chloroplast pigments**, — chlorophylls, carotene, and xanthophyll.

**chlorosis** (klōrō'sīs) *n.* [Gk. *chloros*, pallid.] Abnormal condition characterised by absence of green pigments in plants, owing to lack of light, or to magnesium- or iron-deficiency; green-sickness in humans.

**chlorostatolith** (klō'rōstāt'ōlīth) *n.* [Gk. *chloros*, grass green; *statos*, stationary; *lithos*, stone.] A chloroplast which moves under the influence of gravity in a statocyte; *cf.* statolith, amylostolith.

**chlorotic** (klōrōt'īk) *a.* [Gk. *chloros*, pallid.] *Pert.* or affected by chlorosis.

**choana** (kō'ānā) *n.* [Gk. *choane*, funnel.] A funnel-shaped opening; posterior naris.

**choanocyte** (kō'ānōsīt) *n.* [Gk. *choane*, funnel; *kytos*, hollow.] A cell with funnel-shaped rim or collar round the base of a flagellum.

**choanoid** (kō'ānoid) *a.* [Gk. *choane*, funnel; *eidos*, like.] Funnel-shaped; *appl.* eye muscle, retractor bulbi, absent in snakes, birds, and higher primates.

**choanosome** (kō'ānōsōm) *n.* [Gk. *choane*, funnel; *soma*, body.] In sponges, the inner layer with flagellate cells.

**cholecystokinin** (kōl'ēsīs'tōkīn'īn) *n.* [Gk. *chole*, bile; *kystis*, bladder; *kinein*, to move.] A duodenal hormone which induces contraction of gall-bladder and relaxation of Oddi's sphincter.

**choledoch** (kōl'ēdōk) *a.* [Gk. *chole*, bile; *dochos*, containing.] *Appl.* common bile duct.

**choleic** (kōlē'ik) *a.* [Gk. *chole*, bile.] *Pert.* acid contained in ox bile.

**cholesterol** (kōlē's'tērōl) *n.* [Gk. *chole*, bile; *stereos*, solid.] Cholesterolin, a white fatty alcohol found in protoplasm, nerve tissue, bile, yolk, and other animal substances;  $C_{27}H_{46}O$ .

**choline** (kō'līn, -ēn) *n.* [Gk. *chole*, bile.] A crystalline base found in plants and animals, a decomposition product of lecithin;  $C_5H_{14}O_2N$ .

**cholinergic** (kōlīnēr'jik) *a.* [Gk. *chole*, bile; *ergon*, work.] *Appl.* parasympathetic nerve fibres which liberate acetyl-choline from their terminations; *cf.* adrenergic.

**cholochrome** (kōl'ōkrōm) *n.* [Gk. *chole*, bile; *chroma*, colour.] A bile pigment; biliphaein.

**cholehaematin** (kōl'ōhē'mātin) *n.* [Gk. *chole*, bile; *haima*, blood.] Phylloerythrin; cholehaematin.

**chomophyte** (kō'mōfīt) *n.* [Gk. *choma*, mound; *phyton*, plant.] A plant growing in detritus on rocks.

**chondral** (kōn'drāl) *n.* [Gk. *chondros*, cartilage.] *Pert.* cartilage.

**chondrification** (kōn'drifikā'shūn) *n.* [Gk. *chondros*, cartilage; *L. facere*,

to make.] Conversion into cartilage.

**chondrigen** (kōn'drijēn) *n.* [Gk. *chondros*, cartilage; *gennaein*, to produce.] The base matrix of all cartilaginous substance, a collagen.

**chondrin** (kōn'drīn) *n.* [Gk. *chondros*, cartilage.] A gelatinous substance obtained from cartilage.

**chondriocent** (kōn'driōkōnt) *n.* [Gk. *chondros*, grain; *kontos*, pole.] A rod-like or fibrillar type of chondriosome.

**chondriodieresis** (kōn'driōdiēr'ēsīs) *n.* [Gk. *chondros*, grain; *dieressein*, to swing about.] Changes in mitochondria during cell division.

**chondriokinesis** (kōn'driōkīnē'sīs) *n.* [Gk. *chondros*, grain; *kinesis*, movement.] Division of chondriosomes in mitosis and meiosis.

**chondrioma** (kōndriō'mā) *n.* [Gk. *chondros*, grain.] The chondriosome content of a cell; chondriome.

**chondriomere** (kōn'driōmēr) *n.* [Gk. *chondros*, grain; *meros*, part.] Plastomere, *q.v.*; cytomere, *q.v.*

**chondriomite** (kōn'driōmīt) *n.* [Gk. *chondros*, grain; *mitos*, thread.] A linear type of chondriosome.

**chondrioplast** (kōn'driōplāst) *n.* [Gk. *chondros*, grain; *plastos*, formed.] A rod-like formation of reticular material; Golgi rod.

**chondriosomes** (kōn'driōsōmz) *n. plu.* [Gk. *chondros*, grain; *soma*, body.] Mitochondria, *q.v.*; numerous synonyms: *e.g.* chondriomites, chondriocents, chondriospheres, chondrioplasts.

**chondriosphere** (kōn'driōsfēr) *n.* [Gk. *chondros*, grain; *sphaira*, globe.] A spherical type of chondriosome; mitochondria which have coalesced.

**chondroblast** (kōn'drōblāst) *n.* [Gk. *chondros*, cartilage; *blastos*, bud.] A cartilage-producing cell.

**chondroclast** (kōn'drōklāst) *n.* [Gk. *chondros*, cartilage; *klastos*, broken down.] A large multinucleate cell which destroys cartilage matrix; also chondrioclast.

**chondrocranium** (kôn'drökrä'nīŭm) *n.* [Gk. *chondros*, cartilage; *kranion*, skull.] The skull when in a cartilaginous condition, either temporarily as in embryos, or permanently as in some fishes.

**chondrocyte** (kôn'drösīt) *n.* [Gk. *chondros*, cartilage; *kytos*, hollow.] A cartilage cell.

**chondrogenesis** (kôn'dröjēn'ēsīs) *n.* [Gk. *chondros*, cartilage; *genesis*, descent.] The production or formation of cartilage.

**chondroid** (kôn'droid) *a.* [Gk. *chondros*, cartilage; *eidos*, shape.] Cartilage-like; *appl.* tissue, undeveloped cartilage or pseudo-cartilage serving as support in certain invertebrates and lower vertebrates; *appl.* vesicular supporting tissue of notochord; fibrohyaline.

**chondromucoid** (kôn'drömu'koid) *n.* [Gk. *chondros*, cartilage; *L. mucus*, mucus; Gk. *eidos*, form.] A basophil protein which with collagen forms ground-substance of cartilage; chondromucin.

**chondrophore** (kôn'dröfōr) *n.* [Gk. *chondros*, cartilage; *pherein*, to bear.] A structure which supports the inner hinge cartilage in a bivalve shell.

**chondroskeleton** (kôn'dröskēl'ētōn) *n.* [Gk. *chondros*, cartilage; *skeleton*, dried body.] A cartilaginous skeleton.

**chondrosteous** (kōndrōs'tēus) *a.* [Gk. *chondros*, cartilage; *osteon*, bone.] Having a cartilaginous skeleton.

**chondrosternal** (kôn'dröstēr'nāl) *a.* [Gk. *chondros*, cartilage; *sternon*, breast.] *Pert.* rib cartilages and sternum.

**chone** (kō'nē) *n.* [Gk. *chone*, funnel.] A passage through cortex of sponges, with one or more external openings, and one internal opening.

**chorda** (kōr'dā) *n.* [Gk. *chorde*, string.] The notochord; in plural, tendinous cords attached to valves of heart; any cord-like structure.

**chordacentra** (kōr'dāsēn'trā) *n. plu.* [Gk. *chorde*, string; *L. centrum*, centre.] Centra formed by conversion of chordal sheath into a number of rings; *cf.* arch-centra.

**chordate** (kōr'dāt) *a.* [Gk. *chorde*, string.] Having a notochord.

**chordotonal** (kōr'dōtō'nāl) *a.* [Gk. *chorde*, string; *tonos*, tone.] *Appl.* rod-like or bristle-like receptors for mechanical and sound vibrations, in various parts of body of insects.

**chore** (kō'rē) *n.* [Gk. *chore*, place.] An area manifesting a unity of geographical or environmental conditions; *cf.* biochore, biotope.

**choreiathetose** (kōriāth'ētōs) *a.* [Gk. *choreia*, dance; *athetos*, lawless.] Arrhythmic and uncoordinated; *appl.* foetal movements.

**choriocapillaris** (kōr'īōkāpīl'āris, -kāp'īlā'ris) *n.* [Gk. *chorion*, skin; *L. capillaris*, capillary.] The innermost vascular layer of choroid.

**chorioid**,—choroid, *q.v.*

**chorion** (kō'rīōn) *n.* [Gk. *chorion*, skin.] An embryonic membrane external to and enclosing the amnion; allantochorion, *q.v.*; a hardened shell covering egg of insects; outer membrane of seed.

**chorion frondosum**,—villous placental part of chorion.

**chorion laeve**,—smooth non-placental part of chorion.

**chorionic** (kōrīōn'ik) *a.* [Gk. *chorion*, skin.] *Pert.* the chorion; *appl.* gonadotrophic hormone or prol. an.

**chorioretinal** (kōr'īōrēt'ināl) *a.* [Gk. *chorion*, skin; *L. retina*, retina.] *Pert.* choroid and retina.

**choripetalous** (kō'rīpēt'ālūs) *a.* [Gk. *choris*, separate; *petalon*, leaf.] Having separate petals.

**choriphyllous** (kō'rīfil'ūs) *a.* [Gk. *choris*, separate; *phyllon*, leaf.] Having perianth parts distinct.

**chorisepalous** (kō'rīsēp'ālūs) *a.* [Gk. *choris*, separate; *F. sépale*, sepal.] Having the sepals separate.



**chorisis** (kō'risís) *n.* [Gk. *choris*, separate.] Increase in parts of floral whorl due to division of its primary members; deduplication.

**choroid** (kōr'oid) *a.* [Gk. *chorion*, skin; *eidos*, form.] *Appl.* delicate and highly vascular membranes. *n.* Layer of eye between retina and sclera.

**choroidal** (kōroid'āl) *a.* [Gk. *chorion*, skin; *eidos*, form.] *Pert.* choroid.

**chorology** (kōröl'ōji) *n.* [Gk. *choros*, place; *logos*, discourse.] Biogeography; geographical distribution; biotopography; science of the distribution of organisms or of organs.

**choronomic** (kōrōnōm'ik) *a.* [Gk. *choros*, place; *nomos*, law.] External, *appl.* influences of geographical or regional environment, *opp.* autonomic.

**chorotypes** (kō'rōtips) *n. plu.* [Gk. *choros*, place; *typos*, pattern.] Local types.

**chresard** (krēsård') *n.* [Gk. *chresis*, use; *ardo*, I water.] Soil water available for plant growth; *cf.* echard, holard.

**chromaffin** (krō'māfin) *a.* [Gk. *chroma*, colour; L. *affinis*, related.] Chromaphil.

**chromaphil** (krō'māfil) *a.* [Gk. *chroma*, colour; *philein*, to love.] Stained by chromic acid or its salts when adrenaline is present; *appl.* cells forming medullary parts of suprarenal bodies; *appl.* bodies or paraganglia; chromophil, chromaffin.

**chromaphobe** (krō'māfōb) *a.* [Gk. *chroma*, colour; *phobos*, fear.] *Appl.* non-stainable cells or tissues; chromophobe.

**chromasie** (krō'māsi) *n.* [Gk. *chroma*, colour.] Increase of chromatin in nucleus and formation of nucleolus; *cf.* achromasie.

**chromatic** (krōmāt'ik) *a.* [Gk. *chroma*, colour.] Colourable by means of staining reagents; *pert.* colour; having chromatophores.

**chromatic sphere**,—the sphere formed by coalescence of chromosomes after anaphase in mitosis.

**chromatic threshold**,—the minimal stimulus, varying with wave length of light, which induces a colour sensation.

**chromaticity** (krōmātis'itf) *n.* [Gk. *chroma*, colour.] Unlikeness to grey, or saturation of a colour.

**chromatid** (krō'mätid) *n.* [Gk. *chroma*, colour.] A component of a tetrad in meiosis; a half-chromosome between early prophase and metaphase in mitosis, or between diplotene and second metaphase in meiosis.

**chromatin** (krō'mätin) *n.* [Gk. *chroma*, colour.] A substance in the nucleus which contains nucleic acid proteids, and stains with basic dyes.

**chromatogen organ**,—a brownish lobed body, the axial organ of certain echinoderms.

**chromatoid grains**,—grains in cell-protoplasm, which stain similarly to chromatin.

**chromatolysis** (krō'mätöl'isis) *n.* [Gk. *chroma*, colour; *lysis*, loosing.] Disintegration of Nissl granules, as in fatigued nerve-cells; tigrolysis.

**chromatophil** (krō'mätöfil) *a.* [Gk. *chroma*, colour; *philein*, to love.] Staining easily.

**chromatophore** (krō'mätöfōr) *n.* [Gk. *chroma*, colour; *pherein*, to bear.] A coloured plastid of plants and animals; a colourless body in cytoplasm and developing into a leucoplast, chloroplast, or chromoplast; a pigment cell, or group of cells, which under control of the sympathetic nervous system can be altered in shape to produce a colour change.

**chromatophorotropic** (krō'mätöfō'rōtröp'ik) *a.* [Gk. *chroma*, colour; *pherein*, to bear; *trope*, turn.] *Appl.* a hormone, intermedin, secreted by pars intermedia of pituitary and causing expansion of chromatophores; *appl.* hormone of crustacean eye-stalk.

**chromatophyll** (krō'mätöfil) *n.* [Gk. *chroma*, colour; *phyllon*, leaf.] The colouring matter of plant-like flagellates; also chromophyll.

**chromatoplasm** (krō'mätöplāzm) *n.* [Gk. *chroma*, colour; *plasma*, mould.] The colour or pigment matter in cells.

**chromatosome**,—chromosome.

**chromatospherite** (krō'mätösfēr'it) *n.* [Gk. *chroma*, colour; *sphaira*, globe.] A nucleolus, *q.v.*

**chromidia** (krōmīd'īā) *n. plu.* [Gk. *chroma*, colour; *idion*, *dim.*] Extra-nuclear particles of chromatin, which may replace or be re-formed into nuclei.

**chromidial substance**,—minute basophil granules containing iron, occurring in cytoplasm as chromophil or tigroid bodies.

**chromidiogamy** (krōmīd'īög'āmī) *n.* [Gk. *chroma*, colour; *idion*, *dim.*; *gamos*, marriage.] The union of chromidia from two conjugants.

**chromidiosomes** (krōmīd'īösöms) *n. plu.* [Gk. *chroma*, colour; *idion*, *dim.*; *soma*, body.] The smallest chromatin particles of which the chromidial mass is composed.

**chromiole** (krō'miöl) *n.* [Gk. *chroma*, colour.] One of the minute granules of which a chromomere is composed.

**chromo-argentaffin** (krō'möärjēn'-tāffin) *a.* [Gk. *chroma*, colour; L. *argentum*, silver; *affinis*, related.] Staining with bichromates and silver nitrate; *appl.* flask-shaped cells in epithelium of crypts of Lieberkühn.

**chromoblast** (krō'möbläst) *n.* [Gk. *chroma*, colour; *blastos*, bud.] An embryonic cell giving rise to a pigment cell.

**chromocentre** (krōmösen'tēr) *n.* [Gk. *chroma*, colour; *kentron*, centre.] The fused heterochromatic region around centromeres; fused prochromosomes.

**chromocyte** (krō'mösit) *n.* [Gk. *chroma*, colour; *kytos*, hollow.] Any pigmented cell.

**chromogen** (krō'möjēn) *n.* [Gk. *chroma*, colour; *genos*, birth.] The substance which is converted into a

pigment, *e.g.* by oxidation; a chromogenic organism.

**chromogenic** (krō'möjēn'ik) *a.* [Gk. *chroma*, colour; *genos*, birth.] Colour-producing; *appl.* organisms, as bacteria.

**chromolipides** (krō'mölip'īdz) *n. plu.* [Gk. *chroma*, colour; *lipos*, fat.] The carotenoids and related pigments.

**chromomere** (krō'mömēr) *n.* [Gk. *chroma*, colour; *meros*, part.] One of the chromatin granules of which a chromosome is formed, and which corresponds to an id or a gene; granular part of blood platelet, *opp.* hyalomere.

**chromonema** (krō'mönē'mā) *n.* [Gk. *chroma*, colour; *nema*, thread.] A coiled or convoluted thread in prophase of mitosis; central thread in chromosome. *Plu.* chromonemata.

**chromophanes** (krō'möfānz) *n. plu.* [Gk. *chroma*, colour; *phainein*, to show.] Red, yellow, and green oil globules found in retina of birds, reptiles, fishes, marsupials; any retinal pigments.

**chromophil** (krō'möfil) *a.* [Gk. *chroma*, colour; *philein*, to love.] Chromophil, chromaffin, *q.v.*; chromophilic.

**chromophilous** (krōmöf'ilūs) *a.* [Gk. *chroma*, colour; *philos*, loving.] Staining readily.

**chromophobe** (krō'möföb) *a.* [Gk. *chroma*, colour; *phobos*, fear.] Non-stainable or staining slightly; *appl.* certain cells of pituitary gland; chromaphobe.

**chromophore** (krō'möföör) *n.* [Gk. *chroma*, colour; *pherein*, to bear.] Any substance to whose presence colour in a compound is due.

**chromophyll**,—chromatophyll, *q.v.*

**chromoplast** (krō'möpläst) *n.* [Gk. *chroma*, colour; *plastos*, moulded.] A coloured plastid or pigment body; coloured plastid other than a chloroplast; chromoplastid.

**chromoproteins** (krō'möprö'tēinz) *n. plu.* [Gk. *chroma*, colour; *protos*, first.] Substances formed by combination of a protein with a pigment or chromophore.

**chromosome** (krō'mōsōm) *n.* [Gk. *chroma*, colour; *soma*, body.] One of deeply staining bodies, the number of which is constant for the cells of a species, into which the chromatin resolves itself during karyokinesis and meiosis.

**chromosome-races**,—races differing in number of chromosomes or of chromosome sets.

**chromosomin** (krōmōsō'mīn) *n.* [Gk. *chroma*, colour; *soma*, body.] One of the protein constituents of chromosomes.

**chromospire** (krō'mōspīr) *n.* [Gk. *chroma*, colour; *speira*, coil.] A spireme-like thread formed from nuclear granules in haplomitosis.

**chronaxie**, **chronaxy** (krō'nāksī) *n.* [Gk. *chronos*, time; *axia*, value.] Latent period between electrical stimulus and muscular response; minimal excitation time required with a current of an intensity twice the threshold necessary for excitation when the duration of the stimulus is prolonged; chronaxia.

**chrysalis** (kris'ālīs) *n.* [Gk. *chrysalis*, gold, golden thing.] Pupa stage of certain insects.

**chrysocarpous** (kris'ōkār'pūs) *a.* [Gk. *chrysos*, gold; *karpōs*, fruit.] With golden fruit.

**chrysophanic** (krisōfān'ik) *a.* [Gk. *chrysos*, gold; *phainein*, to show.] Having a golden or bright orange colour, *appl.* an acid formed in certain lichens.

**chrysophyll** (kris'ōfil) *n.* [Gk. *chrysos*, gold; *phyllon*, leaf.] A yellow colouring matter in plants, a decomposition product of chlorophyll.

**chylaceous** (kilā'sēus) *a.* [Gk. *chylos*, juice.] Of the nature of chyle.

**chyle** (kil) *n.* [Gk. *chylos*, juice.] Lymph containing globules of emulsified fat, found in the lacteals during digestion.

**chylifaction** (ki'lifāk'shūn) *n.* [Gk. *chylos*, juice; *L. facere*, to make.] Formation of chyle; also chylification; chylopoiesis.

**chyliferous** (kilif'ērūs) *a.* [Gk. *chylos*, juice; *L. ferre*, to carry.]

Chyle-conducting; *appl.* tubes or vessels; chylophoric.

**chylific** (kilif'ik) *a.* [Gk. *chylos*, juice; *L. facere*, to make.] Chyle-producing; *appl.* ventricle or true stomach of insects.

**chylocaulous** (kilōcōl'ūs) *a.* [Gk. *chylos*, juice; *kaulos*, stem.] With fleshy stems.

**chylocyst** (ki'lōsist) *n.* [Gk. *chylos*, juice; *kystis*, bladder.] The chyle receptacle.

**chylomicrons** (kilōmī'krōnz) *n. plu.* [Gk. *chylos*, juice; *mikros*, small.] Minute fatty particles in plasma, plentiful during fat digestion.

**chylophoric**,—chyliiferous.

**chylophyllous** (ki'lōfil'ūs) *a.* [Gk. *chylos*, juice; *phyllon*, leaf.] With fleshy leaves; *appl.* certain desert plants.

**chylopoiesis** (ki'lōpoiē'sis) *n.* [Gk. *chylos*, juice; *poiein*, to produce.] The production of chyle.

**chyme** (kīm) *n.* [Gk. *chymos*, juice.] The partially digested food after leaving the stomach.

**chymification** (ki'mifikā'shūn) *n.* [Gk. *chymos*, juice; *L. facere*, to make.] The process of converting food into chyme.

**chymosin**,—rennin, *q.v.*

**chytridium** (kītrid'iūm) *n.* [Gk. *chytridion*, little pot.] The spore vessel of certain fungi.

**cibarium** (sibā'riūm) *n.* [L. *cibaria*, victuals.] The part of the buccal cavity anterior to pharynx, in insects.

**cicatricial tissue**,—newly - formed fibrillar connective tissue which closes and draws together wounds.

**cicatrice** (sikāt'rikl), **cicatricula** (sik'ātrik'ulā), **cicatrix** (sik'ātriks, sikā'triks) *n.* [L. *cicatrix*, scar.] The blastoderm in bird and reptile eggs; a small scar in place of previous attachment of an organ; a scar; the mark left after healing of a wound in plants.

**cinnal** (sīs'ināl) *a.* [Gk. *kikinnos*, curled lock.] *Appl.* uniparous cymose branching in which daughter axes are developed right and left alternately; cinninal.

**cilia** (sil'fā) *n. plu.* [*L. cilium*, eyelid.] Hairlike vibratile outgrowths of ectoderm, or processes, of many cells; barbicels of a feather; eyelashes.

**ciliaris** (sil'fā'ris) *n.* [*L. cilium*, eyelid.] Unstriped muscle forming a ring outside anterior part of choroid and, attached to ciliary processes, acting on convexity of lens.

**ciliary** (sil'fā'ri) *a.* [*L. cilium*, eyelid.] *Pert.* cilia; *appl.* certain structures in the eyeball.

**ciliate** (sil'fāt) *a.* [*L. cilium*, eyelid.] Provided with cilia; ciliated.

**ciliated epithelium**,—an epithelium found lining various passages, usually with columnar cells provided with cilia on the free surface.

**ciliograde** (sil'fōgrād) *a.* [*L. cilium*, eyelid; *gradus*, step.] Progressing by movement of cilia.

**ciliospore** (sil'fōspōr) *n.* [*L. cilium*, eyelid; *Gk. sporos*, seed.] A ciliated protozoan swarm-spore.

**cilium** (sil'fūm) *n.* [*L. cilium*, eyelid.] *Sing.* of cilia, *q.v.*

**cinchonine** (sin'kōnin) *n.* [After Countess *de Chinchon*.] Alkaloid found in various Rubiaceae.

**cincinnus** (sinsin'ūs) *n.* [*L. cincinnus*, curl.] A scorpoid cyme.

**cinclides** (sing'klidēz) *n. plu.* [*Gk. kingklis*, latticed gate.] Perforations, in body wall of certain Anthozoa, for extrusion of acontia. *Sing.* cinclis.

**cinerea** (sinē'reā) *n.* [*L. cinereus*, ashen.] The grey matter of the nervous system.

**cingulate** (sing'gūlāt) *a.* [*L. cingulum*, girdle.] Having a girdle or cingulum; shaped like a girdle; *appl.* a gyrus and sulcus above corpus callosum.

**cingulum** (sing'gūlūm) *n.* [*L. cingulum*, girdle.] Any structure which is like a girdle; part of plant between root and stem; part of diatom frustule uniting valves; a ridge round base of crown of a tooth; a tract of fibres connecting callosal and hippocampal convolutions of brain; outer ciliary

zone on disc of rotifers; clitellum, *q.v.*

**circinate** (sir'sināt) *a.* [*L. circinus*, compasses.] Rolled on the axis, so that apex is centre.

**circulation** (sēr'kūlā'shūn) *n.* [*L. circulatio*, act of circulating.] The regular movement of any fluid within definite channels in the body; streaming movement of protoplasm of plant cells.

**circulus** (sir'kūlūs) *n.* [*L. circulus*, circle.] Any ringlike arrangement, as of blood-vessels caused by branching or connection with one another, as circulus major of iris, or as of markings of fish scales.

**circulus arteriosus**,—a vascular ring at base of brain; circle of Willis.

**circumduction** (sēr'kūmdūk'shūn) *n.* [*L. circum*, around; *ductus*, led.] The form of motion exhibited by a bone describing a conical space with the articular cavity as apex.

**circumferential** (sēr'kūmfērēn'shāl) *a.* [*L. circum*, around; *ferre*, to bear.] *Appl.* cartilages which surround certain articulatory fossae; *appl.* primary lamellae parallel to circumference of bone.

**circumfila** (sēr'kūm'filā) *n. plu.* [*L. circum*, around; *filum*, thread.] Looped or wreathed filaments on antennal segments, as in gall-midges.

**circumflex** (sēr'kūmfleks) *a.* [*L. circum*, around; *flectere*, to bend.] Bending round; *appl.* certain arteries, veins; *appl.* nerve, the axillary nerve.

**circumfluence** (sēr'kūm'flooēns) *n.* [*L. circum*, around; *fluens*, flowing.] In Protozoa, ingestion by protoplasm flowing towards food and surrounding it after contact; *cf.* circumvallation.

**circumgenital** (sēr'kūmjēn'itāl) *a.* [*L. circum*, around; *gignere*, to beget.] Surrounding the genital pore; *appl.* glands secreting waxy powder in oviparous species of Coccidae.

**circumnutation** (sēr'kūmnūtā'shūn) *n.* [L. *circum*, around; *nutare*, to nod.] The irregular elliptical or spiral movement exhibited by apex of a growing stem, shoot or tendril.

**circumoesophageal** (sēr'kūmēsō-fāj'ēāl) *a.* [L. *circum*, around; Gk. *oisophagos*, gullet.] *Appl.* structures or organs surrounding or passing along the gullet.

**circumpolar** (sēr'kūmpō'lār) *a.* [L. *circum*, around; *polus*, end of axle.] *Appl.* flora and fauna of Polar regions.

**circumpulpar** (sēr'kūmpūl'pār) *a.* [L. *circum*, around; *pulpa*, fruit-pulp.] *Appl.* dentine forming layer around pulp cavity of teeth, as in fishes.

**circumscissile** (sēr'kūmsis'fl) *a.* [L. *circum*, around; *scindere*, to cut.] Splitting along a circular line; *appl.* dehiscence exhibited by a pyxidium.

**circumscript** (sēr'kūmskrīpt) *a.* [L. *circumscribere*, to draw line around.] *Appl.* marginal sphincter when sharply defined, in sea-anemones.

**circumvallate** (sēr'kūmvāl'āt) *a.* [L. *circum*, around; *vallum*, rampart.] Encircled by a wall, as of tissue; *appl.* certain tongue papillae.

**circumvallation** (sēr'kūmvālā'shūn) *n.* [L. *circum*, around; *vallare*, to wall.] Ingestion of food by extruded pseudopodia, as in protozoa or in phagocytes.

**circumvascular** (sēr'kūmvās'kūlār) *a.* [L. *circum*, around; *vasculum*, small vessel.] *Appl.* dentine lining vascular canals in pulp cavity of teeth, as in fishes.

**cirrate** (sir'āt) *a.* [L. *cirratus*, having curls.] Having cirri.

**cirrhous** and **cirrhoi**,—see cirrus.

**cirroze** (sir'ōs, sir'ōs') *a.* [L. *cirrus*, curl.] With cirri or tendrils.

**cirrus** (sir'ūs) *n.*, **cirri** (sir'i) *plu.* [L. *cirrus*, curl.] Tendrils; appendages of barnacles; jointed filaments of axis or of aboral surface of crinoids; barbels of fishes; respiratory and tactile ap-

pendages of worms; organs of copulation in some molluscs and trematodes; hairlike structures on appendages of insects.

**cisterna** (sistēr'nā) *n.* [L. *cisterna*, cistern.] Closed space containing fluid, as any of the subarachnoid spaces.

**citrin** (sit'rīn) *n.* [L.L. *citrus*, lemon.] A factor in lemon juice which regulates capillary permeability; vitamin P.

**citrulline** (sitrūl'īn) *n.* [L. *citrullus*, water-melon.] An amino acid first obtained from water-melon, also occurring as intermediate product in formation of urea from ornithine;  $C_6H_{13}O_3N_3$ .

**cladanthous** (klādānthūs) *a.* [Gk. *klados*, sprout; *anthos*, flower.] Having terminal archegonia on short lateral branches; cladocarpous.

**cladautoicous** (klād'ōtoik'ūs) *a.* [Gk. *klados*, sprout; *autos*, self; *oikos*, house.] With antheridia on a special stalk as in mosses.

**cladocarpous**,—cladanthous, *q.v.*

**cladode** (klād'ōd) *n.* [Gk. *klados*, sprout.] Branch arising from axil of leaf, or green flattened stem, resembling a foliage leaf; cladophyll; phylloclade.

**cladodont** (klād'ōdōnt) *a.* [Gk. *klados*, sprout; *odous*, tooth.] Having or *appl.* teeth with prominent central and small lateral cusps.

**cladogenesis** (klādōjēn'ēsīs) *n.* [Gk. *klados*, sprout; *genesis*, descent.] Branching of evolutionary lineages so as to produce new types.

**cladogenous** (klādōj'ēnūs) *a.* [Gk. *klados*, sprout; *gennaiein*, to produce.] Stem-borne; *appl.* certain roots; cladanthous, *q.v.*

**cladome** (klādōm') *n.* [Gk. *klados*, sprout.] The group of superficially situated rays in a triaene.

**cladophyll** (klād'ōfil) *n.* [Gk. *klados*, sprout; *phyllon*, leaf.] Cladode.

**cladoptosis** (klād'ōptō'sīs) *n.* [Gk. *klados*, sprout; *ptosis*, falling.] Annual or other shedding of twigs.

**cladose** (klād'ōs) *a.* [Gk. *klados*, sprout.] Branched.

- cladosiphonic** (klād'ōsīfōn'īk) *a.* [Gk. *klados*, sprout; *siphon*, tube.] With insertion of leaf-trace on periphery of the axial stele; *opp.* phyllosiphonic.
- cladotyle** (klād'ōtīl) *n.* [Gk. *klados*, sprout; *tylos*, knob.] A rhabdus with one actine branched, the other tylote.
- clamp-connections**, — swellings on certain dikaryotic hyphae, for passage of daughter nuclei to cell below, with subsequent septum formation; also occurring in whorls, for distribution of nuclei to hyphal branches.
- clandestine** (klāndēs'tīn) *a.* [L. *clandestinus*, from *clam*, secretly.] *Appl.* evolution which is not apparent in adult forms; or of adult characters from ancestral embryonic characters.
- clasmatocyte** (klāz'māt'ōsīt, klāsmāt'ōsīt) *n.* [Gk. *klasma*, fragment; *kytos*, hollow.] A variable basiphil phagocyte or macrophage in areolar tissue; a histiocyte.
- claspers** (klās'pērzh) *n. plu.* [M.E. *claspēn*, to hold.] Rod-like processes on pelvic fins of certain male elasmobranchs; outer gonapophyses of insects; valves or harpes of male Lepidoptera; any modification of an organ or part to enable the two sexes to clasp one another; tendrils or climbing shoots.
- claspettes**, — harpagones, *q.v.*
- class** (klās) *n.* [L. *classis*, division.] A division of a phylum and divided into orders, in classification of plants or animals.
- clathrate** (klāth'rāt) *a.* [Gk. *klethra*, lattice.] Lattice-like.
- claustrum** (klōs'trūm) *n.* [L. *claustrum*, bar.] In cerebral hemispheres, a thin layer of grey substance lateral to external capsule; one of the Weberian ossicles in Cyprinidae and Characinidae.
- clava** (klā'vā) *n.* [L. *clava*, club.] The knob-like end of antenna of certain insects; swelling at end of fasciculus gracilis of medulla oblongata.
- clavate** (klā'vāt) *a.* [L. *clava*, club.] Club-shaped; thickened at one end.
- clavicle** (klāv'īkl) *n.* [L. *clavicula*, small key.] Collar-bone, forming anterior or ventral portion of shoulder girdle.
- clavicular** (klāvīk'ulār) *a.* [L. *clavicula*, small key.] *Pert.* clavicle.
- clavicularium** (klāvīk'ulār'iūm) *n.* [L. *clavicula*, small key.] The epiplastron of Chelonia, probably corresponding to clavicles of other forms.
- clavola** (klāv'olā) *n.* [L. *clava*, club.] The flagellar portion, or terminal joints, of insect antenna.
- clavula** (klāv'ulā) *n.* [L. *clava*, club.] A monactinal modification of triaxon spicule; a minute ciliated spine on fasciole of Spatangidae; a clavate sporophore of certain fungi.
- clavus** (klā'vūs) *n.* [L. *clavus*, nail.] The part of an hemelytron lying next scutellum in Hemiptera; a projection or crotchet from scape of spiders; ergot disease in grasses.
- claw** (klō) *n.* [A.S. *clawu*, claw.] The unguis or stalk of a petal; a sharp curved nail on finger or toe; forceps of certain crustaceans; curved process on limb of insect.
- clearing foot**, — filamentous process of exopodite of second maxilla in Phyllocarida.
- cleavage** (klē'vēj) *n.* [A.S. *cleofan*, to cut.] The series of karyokinetic divisions which change the egg into a multicellular embryo.
- cleavage nucleus**, — nucleus of fertilised egg or zygote produced by union of male and female pronuclei; the egg-nucleus of parthenogenetic eggs.
- cleidoic** (klīdō'īk) *a.* [Gk. *kleis*, bar; *oon*, egg.] Having or *pert.* eggs enclosed within a shell or membrane.
- cleistocarp** (klī'stōkârp) *n.* [Gk. *kleistos*, closed; *karpōs*, fruit.] Cleistothecium, *q.v.*
- cleistocarpous** (klī'stōkâr'pūs) *a.* [Gk. *kleistos*, closed; *karpōs*, fruit.] *Appl.* mosses with non-operculate capsules; cleistocarpic.

**cleistogamic** (klistōgām'ík) *a.* [Gk. *kleistos*, closed; *gamos*, marriage.] *Pert.* or possessed of characteristics of cleistogamy; cleistogamous.

**cleistogamy** (klistōg'āmī) *n.* [Gk. *kleistos*, closed; *gamos*, marriage.] State of having small inconspicuous self-fertilising flowers; fertilisation without opening of florets, *opp.* chasmogamy.

**cleistogene** (klī'stōjēn) *n.* [Gk. *kleistos*, closed; *genos*, descent.]

A plant with cleistogamous flowers.

**cleistothecium** (klistōthē'siūm) *n.* [Gk. *kleistos*, closed; *theke*, box.] An ascocarp which remains closed and produces its spores internally.

**cleithrum** (klī'thrūm) *n.* [Gk. *kleithron*, bar.] The pair of additional clavicles in Stegocephalia; clavicular element of some fishes.

**climacteric** (klīmāktēr'ík) *n.* [Gk. *klimakter*, step of staircase.] A critical phase, or period of change, in living organisms; *appl.* change associated with menopause; *appl.* phase of increased respiratory activity at ripening of fruit.

**climatype** (klī'mātip) *n.* [Gk. *klima*, climate; *typos*, image.] A biotype resulting from selection in a particular climate; climatic ecotype.

**climax** (klī'māks) *n.* [Gk. *klímax*, ladder.] The mature or stabilised stage in a successional series of communities, when dominant species are completely adapted to environmental conditions; completion of development, *appl.* leaves.

**clinandrium** (klinān'driūm) *n.* [Gk. *kline*, bed; *aner*, man.] A cavity in the column between anthers in orchids.

**cline** (klīn) *n.* [Gk. *klinein*, to slant.] A series of form changes; gradient of biotypes; character-gradient.

**clinging fibres**,—tendrils fibres, *q.v.*

**clinidium** (klinīd'iūm) *n.* [Gk. *klinidion*, small couch.] A filament in a pycnidium, which produces spores.

**clinoid** (klī'noid) *a.* [Gk. *kline*, couch; *eidos*, form.] *Appl.* processes of sella turcica.

**clinosporangium** (klī'nōspōrān'jūm) *n.* [Gk. *kline*, bed; *spora*, seed; *angeion*, vessel.] Pycnidium, *q.v.*

**clitellum** (klitēl'ūm) *n.* [L. *clitellae*, pack-saddle.] The saddle or swollen glandular portion of skin of certain annelid worms.

**clitoris** (klī'tōris) *n.* [Gk. *kleiein*, to enclose.] An erectile organ, homologous with penis, at upper part of vulva.

**clivus** (klī'vūs) *n.* [L. *clivus*, slope.] A shallow depression in sphenoid, behind dorsum sellae; posterior sloped part of the monticulus.

**cloaca** (kloā'kā) *n.* [L. *cloaca*, sewer.] The common chamber into which intestinal, genital, and urinary canals open, in vertebrates except most mammals.

**clone** (klōn) *n.* [Gk. *klon*, twig.] An individual produced asexually; group of individuals propagated by mitosis from a single ancestor; an apomict strain.

**clonus** (klōn'ūs) *n.* [Gk. *klonos*, violent motion.] A series of muscular contractions when individual contractions are discernible; incomplete tetanus.

**cluster-crystals**,—globular aggregates of calcium oxalate crystals in plant cells; sphaeraphides.

**cluster-cup**,—aecidium, *q.v.*

**clypeal** (klīp'eāl) *a.* [L. *clypeus*, shield.] *Pert.* clypeus of insects.

**clypeate** (klīp'eāt) *a.* [L. *clypeus*, shield.] Round or buckler-like; clypeiform; having a clypeus.

**clypeola** (klīpē'ōlā), **clypeole** (klīp'eōl) *n.* [L. *clypeus*, shield.] A sporophyll in the spike of an Equisetum.

**clypeo-labral** (klīp'eōlāb'rāl) *a.* [L. *clypeus*, shield; *labrum*, lip.] *Appl.* suture between clypeus and labrum.

**clypeus** (klīp'eūs) *n.* [L. *clypeus*, shield.] A sclerite on anteromedian part of insect head; a band of tissue round mouth of peritheciium of certain fungi.

**cnemial** (knē'miāl, nē'miāl) *a.* [Gk. *knemis*, legging.] *Pert.* tibia; *appl.* ridge along dorsal margin of tibia.

**cnemidium** (knēmīd'ium, nēmīd'-ium) *n.* [Gk. *knemis*, legging; *idion*, *dim.*] Lower part of bird's leg devoid of feathers, generally scaly.

**cnemis** (knē'mīs, nē'mīs) *n.* [Gk. *knemis*, legging.] Shin or tibia.

**cnida** (knī'dā, nī'dā) *n.* [Gk. *knide*, nettle.] A cnidoblast; a nematocyst.

**cnidoblast** (knī'döbläst, nī'döbläst) *n.* [Gk. *knide*, nettle; *blastos*, bud.] Stinging cell of Coelentera.

**cnidocil** (knī'dösīl, nī'dösīl) *n.* [Gk. *knide*, nettle; *L. cilium*, eyelid.] A minute process projecting externally from a cnidoblast.

**cnidophore** (knī'döfōr, nī'döfōr) *n.* [Gk. *knide*, nettle; *pherein*, to bear.] A modified zooid which bears nematocysts.

**cnidopod** (knī'döpōd, nī'döpōd) *n.* [Gk. *knide*, nettle; *pous*, foot.] Drawn-out basal part of a nematocyst, embedded in mesogloea.

**cnidosac** (knī'dösāk, nī'dösāk) *n.* [Gk. *knide*, nettle; *sakkos*, bag.] A kidney-shaped swelling or battery, often protected by a hood, found on dactylozooids of Siphonophora.

**coaction** (kōāk'shūn) *n.* [L. *cum*, with; *actio*, action.] The reciprocal activity of organisms within a community.

**coadaptation** (kō'ädāptā'shūn) *n.* [L. *cum*, with; *ad*, to; *aptare*, to fit.] The correlated variation in two mutually dependent organs.

**coagulation** (kōäg'ulā'shūn) *n.* [L. *cum*, with; *agere*, to drive.] Curdling or clotting; the changing from a liquid to a viscous or solid state by chemical reaction; *appl.* vitamin K, the antihæmorrhagic accessory food factor.

**coagulin** (kōäg'ülīn) *n.* [L. *coagulum*, rennet.] Any agent capable of coagulating albuminous substances.

**coagulum** (kōäg'ülūm) *n.* [L. *coagulum*, rennet.] Any coagulated mass; clot; curd.

**coarctate** (kōärk'tāt) *a.* [L. *coarctare*, to press together.] Com-

pressed; closely connected; with abdomen separated from thorax by a constriction.

**coarctate larva or pupa**,—semi-pupa; pseudopupa; a larval stage of certain Diptera.

**cocci** (kōk'sī) *n. plu.* [Gk. *kokkos*, berry.] Septicidal carpels; spore mother cells of certain hepatics; rounded cells, as certain bacteria.

**coccogone** (kōk'ögōn) *n.* [Gk. *kokkos*, berry; *gonos*, birth.] A reproductive cell in certain algae.

**coccoid** (kōk'oid) *a.* [Gk. *kokkos*, berry; *eidōs*, form.] Like or *pert.* a coccus; spherical or globose.

**coccolith** (kōk'ölīth) *n.* [Gk. *kokkos*, berry; *lithos*, stone.] A calcareous spicule in certain Flagellata.

**coccospheres** (kōk'ösfēr) *n. plu.* [Gk. *kokkos*, berry; *sphaira*, globe.] Remains of hard parts of certain algae and radiolarians.

**coccus** (kōk'ūs) *n.* [Gk. *kokkos*, berry.] *Sing.* of cocci, *q.v.*

**coccygeal** (kōksīj'ēäl) *a.* [Gk. *kōkkyx*, cuckoo.] *Pert.* or in region of coccyx.

**coccyx** (kōk'sīks) *n.* [Gk. *kōkkyx*, cuckoo.] The terminal part of the vertebral column beyond the sacrum.

**cochlea** (kōk'lēä) *n.* [Gk. *kochlias*, snail.] Anterior part of labyrinth of the ear, spirally coiled like a snail's shell.

**cochlear** (kōk'lēär) *a.* [Gk. *kochlias*, snail.] *Appl.* aestivation when wholly internal leaf is next but one to wholly external leaf; *pert.* the cochlea.

**cochleariform** (kōk'lēär'īfōrm) *a.* [Gk. *kochlias*, snail; *L. forma*, shape.] Screw- or spoon-shaped; *pert.* thin plate or process of bone separating tensor tympani canal from Eustachian tube.

**cochleate** (kōk'lēät) *a.* [Gk. *kochlias*, snail.] Screw-like; spiral.

**cocoon** (kōkoon') *n.* [F. *cocon*, cocoon.] The protective case of many larval forms before they become pupae; silky or other covering formed by many animals for their eggs.



**coelarium**,—coelomic epithelium ; mesothelium.

**coelenteron** (sēl'ēn'tērōn) *n.* [Gk. *koilos*, hollow ; *enteron*, intestine.] Cavity in body of Coelenterata.

**coeliac** (sē'liāk) *a.* [Gk. *kōilia*, belly.] *Pert.* the abdominal cavity ; *appl.* arteries, veins, nerves, plexus.

**coeloblast** (sē'lōblāst) *n.* [Gk. *koilos*, hollow ; *blastos*, bud.] A division of the embryonic hypoblast.

**coeloconic** (sē'lōkōn'ik) *a.* [Gk. *koilos*, hollow ; *kōnos*, cone.] Having, or consisting of, a conical process situated in a pit ; *appl.* sensillae.

**coelogastrula** (sē'lōgās'troolā) *n.* [Gk. *koilos*, hollow ; *gaster*, stomach.] A gastrula developed from a blastula with a segmentation cavity.

**coelom** (sē'lōm) *n.* [Gk. *kōiloma*, hollow.] Body cavity, *q.v.*

**coelomate** (sē'lōmāt sēlō'māt,) *a.* [Gk. *kōiloma*, hollow.] Having a coelom.

**coelomesoblast** (sēlōmēs'ōblāst) *n.* [Gk. *koilos*, hollow ; *mesos*, middle ; *blastos*, bud.] In segmentation, the mesoblastic bands destined to form wall of coelom and outgrowths.

**coelomic** (sēlōm'ik) *a.* [Gk. *kōiloma*, hollow.] *Pert.* a coelom.

**coelomocytes** (sēlō'mōsīts) *n. plu.* [Gk. *kōiloma*, hollow ; *kytos*, hollow vessel.] Coelomic corpuscles, including amoebocytes and eleocytes, in annelids ; mesenchymatous cells in body cavity of nematodes.

**coelomoduct** (sēlō'mōdūkt) *n.* [Gk. *kōiloma*, hollow ; *L. ducere*, to lead.] A channel leading from body cavity to exterior.

**coelomopores** (sēlō'mōpōrz) *n. plu.* [Gk. *kōiloma*, hollow ; *poros*, passage.] Ducts leading directly from pericardial cavity to exterior, peculiar to Nautilus.

**coelomostome** (sēlō'mōstōm) *n.* [Gk. *kōiloma*, hollow ; *stoma*, mouth.] The external opening of a coelomoduct.

**coelosperm** (sē'lōspērm) *n.* [Gk.

*koilos*, hollow ; *sperma*, seed] A carpel, hollow on its inner surface.

**coelozoic** (sē'lōzō'ik) *a.* [Gk. *koilos*, hollow ; *zoon*, animal.] *Appl.* a trophozoite when situated in some cavity of the body.

**coenanthium** (sēnān'thīūm) *n.* [Gk. *koinos*, common ; *anthos*, flower.] Inflorescence with a nearly flat receptacle having upcurved margins.

**coenenchyma** (sēnēng'kīmā), **coenenchyme** (sēnēng'kīm) *n.* [Gk. *koinos*, common ; *enchyma*, infusion.] Common tissue which connects the polyps or zooids of a compound coral.

**coenobium** (sēnō'biūm) *n.* [Gk. *koinos*, common ; *bios*, life.] A unicellular colony with no marked distinction between vegetative and reproductive units ; colony or unit of undifferentiated cells.

**coenoblast** (sē'nōblāst) *n.* [Gk. *koinos*, common ; *blastos*, bud.] A germ-layer which gives origin to endoderm and mesoderm.

**coenocentre** (sē'nōsēn'tēr) *n.* [Gk. *koinos*, common ; *kentron*, centre.] A deeply-staining body accompanying the ovum in certain fungi.

**coenocyte** (sē'nōsīt) *n.* [Gk. *koinos*, common ; *kytos*, hollow.] A plant body in which constituent protoplasts are not separated by cell walls.

**coenoecium** (sēnē'siūm) *n.* [Gk. *koinos*, common ; *oikos*, house.] The common groundwork of a polyzoan colony.

**coenogamete** (sē'nōgāmēt') *n.* [Gk. *koinos*, common ; *gametes*, spouse.] A multinucleate gamete.

**coenogenesis** (sē'nōjēn'ēsīs) *n.* [Gk. *koinos*, common ; *genesis*, descent.] Common descent from the same ancestry ; blood relationship.

**coenosarc** (sē'nōsārk) *n.* [Gk. *koinos*, common ; *sarx*, flesh.] The common tissue uniting the polyps in a compound colony.

**coenosteum** (sēnōs'tēūm) *n.* [Gk. *koinos*, common ; *osteon*, bone.] The common colonial skeleton in corals.

**coenozygote** (sē'nōzī'gōt) *n.* [Gk. *koinos*, common; *zygon*, yoke.] A zygote formed by coenogametes.

**coenurus** (sēnū'rūs) *n.* [Gk. *koinos*, common; *oura*, tail.] A metacystode with large bladder, from whose walls many daughter-cysts arise, each with one scolex.

**co-enzyme** (kō'ēn'zīm) *n.* [L. *cum*, with; Gk. *en*, in; *zyme*, leaven.] A substance which activates an enzyme or accelerates its action; co-ferment.

**cog-tooth**,—spur or projection of incudal facet of malleus.

**coherent** (kōhē'rēnt) *a.* [L. *cohaerere*, to stick together.] With similar parts united; adherent.

**cohesion** (kōhē'zhūn) *n.* [L. *cohaerere*, to stick together.] Condition of union of separate parts of floral whorl; *cf.* adhesion.

**cohort** (kō'hōrt) *n.* [L. *cohors*, enclosure.] A group of related families; in earlier classifications a somewhat indefinitely limited group.

**coition** (kōish'ūn) *n.* [L. *coire*, to go together.] Sexual intercourse; coitus; copulation.

**colchicine** (kōl'kīsin) *n.* [L. *colchicum*, meadow saffron, from *Colchis*, ancient Mingrelia.] An alkaloid obtained from meadow saffron, influencing mitosis and tissue metabolism;  $C_{22}H_{25}O_6N$ .

**coleogen** (kōl'ēōjēn) *n.* [Gk. *koleos*, sheath; *gennaen*, to produce.] Meristematic layer giving rise to endodermis.

**coleopterous** (kōl'ēōp'tērūs) *a.* [Gk. *koleos*, sheath; *pteron*, wing.] Having the anterior wings hard and used as elytra; *pert.* beetles.

**coleoptile** (kōl'ēōptīl) *n.* [Gk. *koleos*, sheath; *ptilon*, feather.] The first leaf in seedling of monocotyledons.

**coleorrhiza** (kōl'ēōrī'zā) *n.* [Gk. *koleos*, sheath; *rhiza*, root.] The layer surrounding the radicle.

**colic** (kōl'ik) *a.* [Gk. *kolon*, colon.] *Pert.* the colon.

**collagen** (kōl'ājēn) *n.* [Gk. *kolla*, glue; *genos*, descent.] A scleroprotein, occurring as chief constituent of white connective tissue

fibres and organic part of bone, also of some fish scales.

**collar** (kōl'ār) *n.* [M.E. *coler*, collar.] The choana of a collared cell; a prominent fold behind the proboscis in Hemichorda; the fleshy rim projecting beyond the edge of a snail shell; any structure comparable with a collar; collum, *q.v.*; junction between root and stem; collet, *q.v.*

**collateral** (kōlāt'ērāl) *a.* [L. *cum*, with; *latera*, sides.] Side by side; *appl.* ovules; *appl.* bundles with xylem and phloem in the same radius; *appl.* fine lateral branches from the axon of a nerve cell; *appl.* prevertebral ganglia of sympathetic system; *appl.* inheritance of character from a common ancestor in individuals not lineally related; *appl.* circulation established through anastomosis with other parts when the chief vein is obstructed.

**collenchyma** (kōlēng'kimā) *n.* [Gk. *kolla*, glue; *engcyhma*, infusion.] Parenchymatous peripheral supporting tissue with cells more or less elongated and thickened, either at the angles (angular c.), or on walls adjoining intercellular spaces (lacunar c.), or tangentially (lamellar c.); the middle layer of sponges; collenchyme.

**collencyte** (kōl'ēnsit) *n.* [Gk. *kolla*, glue; *en*, in; *kytos*, hollow.] A clear cell with thread-like pseudopodia found in sponges.

**collet** (kōl'ēt) *n.* [F. *collet*, collar.] Root zone, of hypocotyl, where cuticle is absent.

**colleterium** (kōl'ētē'rīūm) *n.* [Gk. *kolla*, glue.] A colleterial or mucus-secreting gland in female reproductive system of insects.

**colleters** (kōl'ētē'rēz) *n. plu.* [Gk. *kolletos*, glued.] The hairs, usually secreting a gluey substance, which cover many resting buds; multicellular glandular trichomes.

**collocystophore** (kōlē'tōsist'ōfōr) *n.* Gk. *kolletos*, glued; *kystis*, bladder; *pherein*, to bear.] The statorhabd of Haliclystus.

- colliculus** (köl'ik'ülüs) *n.* [L. *colliculus*, little hill.] A prominence of corpora quadrigemina; a rounded elevation near apex of antero-lateral surface of arytaenoid cartilages; slight elevation formed by optic nerve at entrance to retina; elevation of urethral crest, with openings of ejaculatory ducts and prostatic utricle.
- colloblast** (köl'öbläst) *n.* [Gk. *kolla*, glue; *blastos*, bud.] A cell on tentacles and pinnae of ctenophores, which carries little globules of adhesive substance; lasso-cell.
- colloid** (köl'oid) *n.* [Gk. *kolla*, glue; *eidos*, form.] A gelatinous substance which does not readily diffuse through an animal or vegetable membrane; *opp.* crystalloid; a substance composed of two homogeneous parts or phases, one of which is dispersed in the other.
- collophore** (köl'öför) *n.* [Gk. *kolla*, glue; *pherein*, to bear.] The ventral tube of Collembola.
- collum** (köl'üm) *n.* [L. *collum*, neck.] Neck; collar, *q.v.*; any collar-like structure; dorsal plate of first body-segment in Diplopoda; basal portion of sporogonium in mosses.
- colon** (köl'ön) *n.* [Gk. *kolon*, colon.] The second portion of intestine of insects; part of the large intestine of vertebrates.
- colony** (köl'önī) *n.* [L. *colonia*, farm.] Any collection of organisms living together, *appl.* ants, bees; a group of animals or plants living together and somewhat isolated, or established in a new area; a coenobium; a group of bacteria or of other micro-organisms in a culture.
- colostrum** (kölös'trüm) *n.* [L. *colostrum*.] Milk secreted at end of pregnancy and differing from that secreted later.
- colulus** (köl'ülüs) *n.* [Dim. of L. *colus*, distaff.] A small conical structure between anterior spinnerets of spiders.
- columella** (köl'ümél'ä) *n.* [L. *columella*, small column.] A prolongation of stalk into sporangium; central core in root-cap; central pillar in skeleton of some corals; the central pillar in gasteropod shells; epipterygoid; the rod, partly bony, partly cartilaginous, connecting tympanum with inner ear in birds, reptiles, and amphibia; the axis of cochlea; lower part of nasal septum.
- columellar** (köl'ümél'är) *a.* [L. *columella*, small column.] *Pert.* columella.
- column** (köl'üm), **columna** (kölüm'nä) *n.* [L. *columna*, pillar.] Any structure like a column, as spinal column; actinian body; stalk of a crinoid; longitudinal bundle of nerve fibres in white matter of spinal cord; nasal septum edge; thick muscular strands found in ventricle; stamens in mallows; united stamens and style in orchids.
- columnals** (kölüm'nälz) *n. plu.* [L. *columna*, pillar.] Stem ossicles in crinoids.
- columnar** (kölüm'när) *a.* [L. *columna*, pillar.] *Pert.*, or like, a column or columna; *appl.* cells longer than broad; *appl.* epithelium of columnar cells.
- coma** (kō'mä) *n.* [Gk. *kome*, hair.] A terminal cluster of bracts, as in pine-apple; hair-tufts on certain seeds. [Gk. *koma*, deep sleep.] Stupor.
- comb-ribs, combs**, — *see* swimming-plates.
- comes** (kō'mēz) *n.* [L. *comes*, companion.] A blood-vessel that runs alongside a nerve.
- comitalia** (köm'itäl'ia) *n. plu.* [L. *comitari*, to accompany.] Small di- or tri-actine spicules in sponges.
- comma** (kōm'ä) *n.* [Gk. *komma*, short clause.] A sarcomere; ino-comma; *appl.* tract, certain nerve fibres in dorsal or posterior column of spinal cord; *appl.* bacillus, the spirillum causing cholera.
- commensal** (kömēn'säl) *n.* [L. *cum*, with; *mensa*, table.] An organism living with another and sharing the food, both species as a rule benefiting by the association.

**comminator** (kōm'ínātōr) *a.* [L. *cum*, with; *minari*, to threaten.] *Appl.* muscles which connect adjacent jaws in Aristotle's lantern.

**commissure** (kōm'ísūr) *n.* [L. *commissura*, seam.] The union-line between two parts; inner side of mericarp; carpellary cohesion plane; a connecting band of nerve tissue.

**comose** (kō'mōs) *a.* [L. *comosus*, hairy.] Hairy; having a tuft of hairs.

**companion cell**,—a narrow cell, retaining its nucleus, derived from a cell giving rise also to a sieve-tube element, in phloem of angiosperms.

**compass** (kūm'pās) *n.* [L. *cum*, together; *passus*, pace.] A curved bifid ossicle, part of Aristotle's lantern.

**compass plants**,—certain plants with permanent north and south direction of their leaf edges.

**compensation point**,—incidence of balance between respiration and photosynthesis, as determined by intensity of light at a given temperature; compensation intensity; limit of sea depth below which plants lose more by respiration than they gain by photosynthesis; compensation depth.

**competence** (kōm'pētēns) *n.* [L. *competere*, to suit.] Reactive state permitting directional development and differentiation in response to a stimulus, as of part of an embryo in response to an evocator or organiser stimulus.

**complement** (kōm'plēmēt) *n.* [L. *complere*, to fill up.] The substance in the blood-serum which when destroyed by heat acts with an amboceptor to produce lysis; alexin; a group composed of one, two, or more genomes or chromosome sets derived from a single nucleus.

**complemental air**,—volume of air which can be taken in addition to that drawn in during normal breathing.

**complemental male**,—a purely male

form, usually small, found living in close proximity to the ordinary hermaphrodite form in certain animals, as barnacles.

**complementary** (kōm'plēmēn'tārī) *n.* [L. *complere*, to fill up.] The coronoid bone. *a.* *Appl.* non-suberised cells loosely arranged in cork tissue and forming air passages; *appl.* genes producing a similar effect when inherited separately but a different effect together.

**complexus** (kōmplēk'sūs) *n.* [L. *complexus*, embrace.] An aggregate; *appl.* muscle, the semispinalis capitis.

**complicant** (kōm'plikānt) *a.* [L. *cum*, together; *plicare*, to fold.] Folding over one another; *appl.* elytra of certain insects.

**complicate** (kōm'plikāt) *a.* [L. *cum*, together; *plicare*, to fold.] Folded; conduplicate; *appl.* leaves folded longitudinally so that right and left halves are in contact; *appl.* insect wings.

**composite** (kōm'pōsīt) *a.* [L. *cum*, together; *ponere*, to place.] Closely-packed, as a capitulum; *appl.* fruits, as sorosis, syconus, strobilus.

**compound** (kōm'pownd) *a.* [L. *cum*, together; *ponere*, to place.] Made up of several elements; *appl.* flowers, pistils, leaves, medullary rays, eyes, etc.; *appl.* starch grains with two or more hila.

**compressor** (kōmprēs'ōr) *n.* [L. *cum*, together; *premere*, to press.] Something that serves to compress; *appl.* muscles, as compressor naris.

**conarium** (kōnā'riūm) *n.* [Gk. *konarion*, little cone.] Transparent deep-sea larva of Velella; the pineal gland or epiphysis cerebri.

**concatenate** (kōnkāt'ēnāt) *a.* [L. *cum*, together; *catenatus*, chained.] Forming a chain, as spores.

**concentric** (kōnsēn'trīk) *a.* [L. *cum*, together; *centrum*, centre.] Having a common centre; *appl.* vascular bundles with one kind of tissue surrounding another; *appl.* corpuscles of Hassall.

**conceptacle** (kōnsēp'tākl) *n.* [L. *concipere*, to conceive.] A depression in thallus of certain algae in which gametangia are borne.

**conceptive** (kōnsēp'tiv) *a.* [L. *concipere*, to conceive.] Capable of being fertilised and producing an embryo.

**concha** (kōng'kā) *n.* [Gk. *kongche*, shell.] The cavity of the external ear, which opens into the external acoustic meatus; a superior, middle, and inferior projection from lateral wall of nasal cavity; turbinal body; one of two curved plates of sphenoidal bone; a marine shell.

**conchiform** (kōng'kifōrm) *a.* [L. *concha*, shell; *forma*, shape.] Shaped like a concha; shell-shaped; conchoid.

**conchiolin** (kōngki'ōlin) *n.* [Gk. *kongche*, shell.] The organic substance that forms the basis of shells of molluscs.

**conchology** (kōngkōl'ōji) *n.* [Gk. *kongche*, shell; *logos*, discourse.] The branch of zoology dealing with molluscs or their shells.

**conchula** (kōng'kulā) *n.* [L. *concha*, shell.] The conspicuous protuberant lip of the modified sulcus in *Peachia*.

**concolorate** (kōnkul'orāt) *a.* [L. *concolor*, of the same colour.] Similarly coloured on both sides.

**conrescence** (kōnkrēs'ēns) *n.* [L. *conrescere*, to grow together.] The growing together of parts.

**concrete** (kōnkrēt) *a.* [L. *concretus*, grown together.] Grown together to form a single structure.

**condensation** (kōndēnsā'shūn) *n.* [L. *condensatio*; from *cum*, together, *densare*, to make thick.] Process of making or becoming thick; contraction, thickening and spiralisation of chromatids during prophase.

**condensed** (kōndēn'sd) *a.* [L. *condensare*, to press close together.] *Appl.* inflorescence with short-stalked or sessile flowers closely crowded.

**conditional**,—*appl.* dominance owing to influence of modifying genes.

**conditioned**, *appl.* reflex depending on new functional connections in central nervous system; *appl.* stimulus inducing a conditioned reflex.

**conducting** (kōndūk'ting) *a.* [L. *conducere*, to lead together.] Conveying; *appl.* tissues, bundles.

**conduction** (kōndūk'shūn) *n.* [L. *conducere*, to lead together.] The transference of soluble matter from one part of a plant to another; the transmission of an excitation, function of nervous system.

**conductivity** (kōn'duktiv'itē) *n.* [L. *conducere*, to lead together.] Power of transmitting an impulse.

**conductor** (kōndūk'tōr) *n.* [L. *conducere*, to lead together.] That which can transmit; a projection at base of embolus in spiders.

**conduplicate** (kōndū'plikāt) *a.* [L. *conduplicare*, to fold together.] *Appl.* cotyledons folded to embrace the radicle; *appl.* vernation when one half of the leaf is folded upon the other.

**condylar** (kōn'dilār) *a.* [Gk. *kondylos*, knuckle.] *Pert.* a condyle.

**condyle** (kōn'dīl) *n.* [Gk. *kondylos*, knuckle.] The antheridium of stoneworts; a process on a bone for purposes of articulation; a rounded structure adapted to fit into a socket.

**condyloid** (kōn'diloid) *n.* [Gk. *kondylos*, knuckle; *eidos*, form.] Shaped like, or situated near a condyle.

**cone** (kōn) *n.* [Gk. *konos*, cone.] The female flower of *Coniferae*, with woody axis and spirally-arranged carpels; strobile; terminal spike or fructification in clubmosses and horsetails; a conical elevation on an egg just before fertilisation; a conical or flask-shaped cell of the retina.

**cone of origin**,—small clear area of nerve cell at the point of exit of the axon; implantation cone; axon hill.

**cone of Wulzen** [*R. Wulzen*, American physiologist]. A structure projecting forwards from pars intermedia into hypophyseal cavity in pituitary region of ox and pig.

**cone-bipolars**, — bipolar cells whose inner ends ramify in contact with dendrites of ganglionic cells.

**confluence** (kōn'flooēns) *n.* [L. *cum*, with; *fluere*, to flow.] Angle of union of superior sagittal and transverse sinuses at occipital bone; torcular Herophili.

**congeneric** (kōn'jēnēr'ik) *a.* [L. *congener*, of same race.] Belonging to the same genus.

**congenetic** (kōnjēnēt'ik) *a.* [L. *cum*, with; Gk. *genesis*, descent.] Having the same origin; alike in descent.

**congenital** (kōnjēn'itāl) *a.* [L. *cum*, with; *gignere*, to beget.] Present at birth; born with.

**congestin** (kōnjēs'tin) *n.* [L. *congestus*, heaped up.] A toxin of sea-anemone tentacles.

**conglobate** (kōn-glō'bāt) *a.* [L. *conglobatus*, formed into a ball.] Ball-shaped; *appl.* gland on lower side of ductus ejaculatorius in insects.

**conglomerate** (kōn-glōm'ērāt) *a.* [L. *cum*, together; *glomerare*, to wind.] Bunched or crowded together.

**congression** (kōng'rēsh'ūn) *n.* [L. *congressio*, meeting.] Chromosome movement to equatorial plane of spindle at metaphase.

**coni** (kō'nī) *n. plu.* [L. *conus*, cone.] Cones; *coni vasculosi*; lobules forming head of epididymis.

**conidial** (kōnid'īāl) *a.* [Gk. *konis*, dust; *idion*, *dim.*] *Pert.* a conidium.

**conidiiferous** (kōnid'īf'ērūs) *a.* [Gk. *konis*, dust; *idion*, *dim.*; L. *ferre*, to bear.] Bearing conidia.

**conidiocarp** (kōnid'īōkârp) *n.* [Gk. *konis*, dust; *idion*, *dim.*; *karpōs*, fruit.] A collection of conidiophores enclosed in a covering; a pycnidium.

**conidiophore** (kōnid'īōfōr) *n.* [Gk. *konis*, dust; *idion*, *dim.*; *pherein*, to bear.] A hypha with sterigmata which bear conidia.

**conidiospore** (kōnid'īōspōr) *n.* [Gk. *konis*, dust; *idion*, *dim.*; *spōros*, seed.] Spore or conidium produced when dry conditions inhibit

reproduction by zoospores, in Phycomycetes.

**conidium** (kōnid'īūm) *n.* [Gk. *konis*, dust; *idion*, *dim.*] A fungal spore asexually produced by constriction of sterigma or of part of a hypha; gonidium.

**coniferous** (kōnif'ērūs) *a.* [L. *conus*, cone; *ferre*, to bear.] Cone-bearing.

**conjugate** (kōn'joogāt) *v.* [L. *conjugare*, to join together.] To unite, as protozoa; to undergo conjugation. *a.* United in pairs; *appl.* pores united by a groove; *appl.* division in pairs of monoploid nuclei.

**conjugated** (kōn'joogātēd) *a.* [L. *conjugare*, to join together.] United; *appl.* protein, when molecule united to non-protein molecule.

**conjugation** (kōn'joogā'shūn) *n.* [L. *cum*, together; *jungere*, to yoke.] The temporary union or complete fusion of two gametes or unicellular organisms; the pairing of chromosomes.

**conjunctiva** (kōn'jūngktī'vā) *n.* [L. *cum*, together; *jungere*, to join.] Mucous membrane of eye, lining eyelids and reflected over fore part of sclera and constituting corneal epithelium.

**conjunctive** (kōnjūngk'tiv) *a.* [L. *cum*, together; *jungere*, to join.] *Appl.* parenchyma cells in inter-spaces of stelar elements.

**connate** (kōn'nāt, kōnāt') *a.* [L. *cum*, together; *gnatus*, born.] Firmly joined together from birth; connate-perfoliate, joined together at base so as to surround stem, *appl.* opposite sessile leaves.

**connective** (kōnēk'tiv) *n.* [L. *connectere*, to bind together.] A connecting band of nerve tissue between two ganglia; a tissue separating two lobes of anther.

**connective tissue**, — a mesoblastic tissue with a large amount of intercellular substance, and usually connecting and supporting other tissues.

**connexivum** (kõnĕk'sivũm) *n.* [L. *connectere*, to fasten together.] Flattened lateral margin of abdomen in bugs.

**connivent** (kõn'vĕnt) *a.* [L. *connivere*, to close the eyes.] Converging; arching over so as to meet.

**conoid** (kõ'noid) *a.* [Gk. *konos*, cone; *eidos*, form.] Cone-like, but not quite conical.

**conoid ligament**,—one of the fasciculi of the coraco-clavicular ligament.

**conoid tubercle**,—coracoid tuberosity, a small rough eminence on posterior border of clavicle, serving for attachment of conoid ligament.

**conotheca** (kõnõthĕ'kā) *n.* [Gk. *konos*, cone; *theke*, case.] Thin integument of phragmocone.

**consensual** (kõnsĕn'sũāl) *a.* [L. *consensus*, agreement.] *Appl.* involuntary action correlated with voluntary action; reacting to excitation of a corresponding organ; *appl.* contraction of both pupils when only one retina is directly stimulated.

**consociation** (kõn'sõsiā'shũn) *n.* [L. *consociatio*, partnership.] A unit of a plant association, characterised by a single dominant species.

**consociates** (kõnsõ'siēz) *n.* [L. *cum*, together; *socius*, fellow.] A consociation representing a stage in the process of succession.

**consortes** (kõnsõr'tēz) *n. plu.* [L. *consortes*, partners.] Associate organisms other than symbionts, commensals, or hosts and parasites. *Sing.* consors.

**consortium** (kõnsõr'tiũm) *n.* [L. *consortium*, partnership.] The compound thallus of lichens.

**constricted** (kõnstrikt'ĕd) *a.* [L. *constrictus*, drawn together.] Narrowed; compressed at regular intervals.

**constriction** (kõnstrikt'shũn) *n.* [L. *constrictus*, drawn together.] A constricted part or place, as a node of Ranvier; non-spiralising chromosome segment at metaphase,

either associated with the centromere, or acentric, or controlled by the nucleolus.

**constrictor** (kõnstrikt'tõr) *n.* [L. *constrictus*, drawn together.] A muscle which compresses or constricts, *e.g.*, constrictor pharyngis, c. urethrae.

**consute** (kõn'sũt) *a.* [L. *consuere*, to sew together.] With stitch-like markings; *appl.* elytra of certain beetles.

**contabescence** (kõn'tābĕs'ĕns) *n.* [L. *contabescere*, to waste away.] Abortion or atrophy of stamens.

**contact receptor**,—a receptor in epidermis or in dermis.

**context** (kõn'tĕkst) *n.* [L. *cum*, together; *texere*, to weave.] The layers developed between hymenium and true mycelium in certain fungi.

**continuity** (kõntinũ'ĩti) *n.* [L. *continuus*, continuous.] Succession without a break, especially continuity of germ plasm.

**contorted** (kõntõr'tĕd) *a.* [L. *contortus*, twisted together.] Twisted; *appl.* aestivation in which one leaf overlaps the next with one margin, and is overlapped by the previous on the other.

**contortuplicate** (kõntõr'tũplikāt) *a.* [L. *cum*, with; *torquere*, to twist; *plicare*, to fold.] *Appl.* bud with contorted and plicate leaves.

**contour** (kõn'toor) *n.* [F. *contourner*, to twist.] Outline of a figure or body; *appl.* outermost feathers that cover the body of a bird.

**contractile** (kõntrāk'tĩl) *a.* [L. *cum*, together; *trahere*, to draw.] Capable of contracting.

**contractile cell**,—any cell in a sporangium or an anther wall which by hygroscopic contraction helps to open the organ.

**contractile fibre-cells**,—elongated, spindle-shaped, more or less polyhedral, nucleated muscle-cells, containing a central bundle of fibrillae.

**contractile vacuole**,—a small spherical vesicle, found in cytoplasm of many Protista, with excretory or hydrostatic function.

**contractility** (kōn'trāktīl'itī) *n.* [L. *cum*, together, *trahere*, to draw.] The power by which muscle-fibres are enabled to contract.

**contractin**, — presumable neuro-humor inducing contraction of chromatophores in crustaceans. *Opp.* *expantin*.

**contracture** (kōn'trāk'tūr) *n.* [L. *contractus*, drawn together.] Contraction of muscles persisting after stimulus has been removed.

**contra-deciduate** (kōn'trādēsīd'ūāt) *a.* [L. *contra*, opposite to; *decidere*, to fall off.] *Appl.* foetal placenta and distal part of allantois.

**contranatant** (kōn'trānātānt) *a.* [L. *contra*, against; *natare*, to swim.] Swimming or migrating against the current, *opp.* *denatant*.

**conuli** (kō'nūli) *n. plu.* [*Dim.* of L. *conus*, cone.] Tent-like projections on surface of certain sponges caused by principal skeletal elements.

**conus** (kō'nūs) *n.* [L. *conus*, cone.] Any cone-shaped structure, as *conus arteriosus*, a structure between ventricle and aorta in fishes and amphibians; *diverticulum* of right ventricle from which pulmonary artery arises; *conus medullaris*, the tapering end of spinal cord.

**convergence** (kōnvēr'jēns) *n.* [L. *convergere*, to incline together.] The development of similar characters in organisms belonging to different groups; *heterogenetic homoeomorphosis*; *homoplasy*.

**convolute** (kōn'völūt) *a.* [L. *cum*, together; *volvere*, to wind.] Rolled together; *appl.* leaves and cotyledons; *appl.* shells in which outer whorls overlap inner; coiled; convoluted, *appl.* parts of renal tubule.

**convolution** (kōn'völū'shūn) *n.* [L. *cum*, together; *volvere*, to wind.] A coiling or twisting, as of brain, intestine.

**coprodaeum** (kōp'rōdē'ūm) *n.* [Gk. *kopros*, dung; *odos*, way.] The division of cloaca which receives rectum.

**coprolite** (kōp'rōlit) *n.* [Gk. *kopros*,

dung; *lithos*, stone.] Petrified faeces.

**coprophagous** (kōprōf'āgūs) *a.* [Gk. *kopros*, dung; *phagein*, to eat.] Feeding on dung; *appl.* insects.

**coprophil** (kōp'rōfil) *a.* [Gk. *kopros*, dung; *philos*, loving.] *Appl.* dung bacteria and flagellates; *coprophytic*.

**coprozoic** (kōp'rōzō'ik) *a.* [Gk. *kopros*, dung; *zoon*, animal.] Inhabiting faeces, as some protozoa.

**copula** (kōp'ulā) *n.* [L. *copula*, bond.] A ridge in development of the tongue, formed by union of ventral ends of second and third arches; *basihyal* or *os interglossum* in certain reptiles; any bridging or connecting structure.

**copularium** (kōpūlā'riūm) *n.* [L. *copula*, bond.] A cyst formed around two associated gametocytes, in gregarines.

**copulation** (kōpūlā'shūn) *n.* [L. *copula*, bond.] Sexual union; coition; in protozoa, complete fusion of two individuals; conjugation, as in yeasts.

**coracoid** (kōr'ākoid) *a.* [Gk. *korax*, crow; *eidos*, form.] *Appl.* or *pert.* bone or part of the pectoral girdle between scapula and sternum; *appl.* ligament which stretches over the suprascapular notch.

**coracoid process**, — the rudimentary coracoid element fused to the scapula in most mammals.

**coralliferous** (kōrālīf'ērūs) *a.* [Gk. *korallion*, coral; L. *ferre*, to bear.] Coral-forming; containing coral.

**coralline** (kōr'ālin) *a.* [Gk. *korallion*, coral.] Resembling a coral; *appl.* Hydrozoa and Polyzoa; composed of coral; *appl.* certain Algae; *appl.* a Pliocene crag or deposit containing fossil Polyzoa and Mollusca.

**corallite** (kōr'ālīt) *n.* [Gk. *korallion*, coral.] Cup of a single polyp of coral.

**coralloid** (kōr'āloid) *a.* [Gk. *korallion*, coral; *eidos*, form.] Resembling, or branching like a coral; *appl.* gleba, roots, etc.



**corallum** (kōrāl'ūm) *n.* [Gk. *koral-lion*, coral.] Skeleton of compound coral.

**corbiculum** (kōrbik'ūlūm) *n.* [L. *dim.* of *corbis*, basket.] Fringe of hair on insect tibia; the pollen-collecting apparatus of a bee. *Plu.* corbicula.

**corbula** (kōr'būlā) *n.* [L. *corbis*, basket.] The phyllactocarp of *Aglaeophenia*, etc., a stem with alternate branches rising upwards and forming a pod-like structure.

**cord** (kōrd) *n.* [Gk. *chorde*, cord.] Any cord-like structure, as spinal cord, spermatic cord.

**cordate** (kōr'dāt) *a.* [L. *cor*, heart.] Heart-shaped; cordiform.

**cordiform tendon**,—the central aponeurosis of the diaphragm.

**cordylus** (kōrdi'lus) *n.* [Gk. *kordyle*, swelling.] An intertentacular exumbra structure with core of vacuolated cells and flattened ectoderm.

**coremata** (kōrē'mātā) *n. plu.* [Gk. *korema*, broom.] Paired sacs bearing hairs, on membrane between seventh and eighth abdominal segments, accessory copulatory organ in moths.

**coremiform** (kōrē'mifōrm) *a.* [Gk. *korema*, broom; L. *forma*, shape.] Formed like a broom or sheaf.

**coremium** (kōrē'miūm) *n.* [Gk. *korema*, broom.] A sheaf-like aggregation of conidiophores, or of hyphae.

**coriaceous** (kōrīā'shūs) *a.* [L. *corium*, leather.] Leathery; *appl.* leaves.

**corium** (kō'rīūm) *n.* [L. *corium*, leather.] The middle division of an elytron; deeper-seated layer of the skin, consisting of a vascular connective tissue; cutis vera; derma.

**cork** (kōrk) *n.* [Sp. *alcorque*, cork.] A tissue derived usually from outer layer of cortex in woody plants.

**cork-cambium**,—phellogen, *q.v.*

**corm** (kōrm), **cormus** (kōr'mūs) *n.* [Gk. *kormos*, trunk.] An enlarged solid subterranean stem, rounded in shape, composed of two or more

internodes and covered externally by a few thin membranous scales or cataphyllary leaves.

**cormel** (kōr'mēl) *n.* [Gk. *kormos*, trunk.] A secondary corm produced by an old corm.

**cormidium** (kōrmīd'iūm) *n.* [Gk. *kormos*, trunk; *idion*, *dim.*] An aggregation of individuals in a siphonophore, borne on the coenosarc and capable of liberation therefrom.

**cormoid** (kōr'moid) *a.* [Gk. *kormos*, trunk; *eidos*, form.] Like a corm.

**cormophylogeny** (kōr'mōfilōj'ēnī) *n.* [Gk. *kormos*, trunk; *phyle*, tribe; *genos*, offspring.] Development of families or races.

**cormophyte** (kōr'mōfit) *n.* [Gk. *kormos*, trunk; *phyton*, plant.] A plant which possesses stem and root. *Opp.* thallophyte.

**cormous** (kōr'mūs) *a.* [Gk. *kormos*, trunk.] Corm-producing.

**cornea** (kōr'nēā) *n.* [L. *corneus*, horny.] The transparent covering on anterior surface of eyeball; outer transparent part of each element of a compound eye.

**corneagen** (kōr'nēājēn) *a.* [L. *cornu*, horn; Gk. *-genes*, producing.] Cornea-producing; *appl.* cells immediately below cuticle, which secrete cuticular lens and are renewed on ecdysis.

**corneal** (kōr'nēāl) *a.* [L. *corneus*, horny.] *Pert.* the cornea.

**corneoscute** (kōr'nēōskūt) *n.* [L. *corneus*, horny; *scutum*, shield.] An epidermal scale.

**corneous** (kōr'nēūs) *a.* [L. *corneus*, horny.] Horny; *appl.* sheath covering bill of birds.

**cornicle** (kōr'nīkl) *n.* [L. *dim.* of *cornu*, horn.] A wax-secreting organ of aphids; corniculum, *q.v.*

**corniculate** (kōrnīk'ūlāt) *a.* [L. *dim.* of *cornu*, horn.] Having small horns.

**corniculate cartilages**,—two small, conical, elastic cartilages articulating with apices of aryaenoids; Santorini's cartilages.

**corniculum** (kôrnîk'ûlûm) *n.* [L. *dim. of cornu, horn.*] A small horn or horn-like process.

**cornification** (kôr'nîfîkâ'shûn) *n.* [L. *cornu, horn; facere, to make.*] Formation of outer horny layer of epidermis.

**cornua** (kôr'nûâ) *n. plu.* [L. *cornu, horn.*] Horns; horn-like prolongations; *appl.* bones, nerve tissues, cavities, etc.; the dorsal, lateral, and ventral columns of grey substance in spinal cord. *Sing.* cornu.

**cornucopia** (kôr'nûkô'piâ) *n.* [L. *cornu, horn; copia, plenty.*] The horizontal portion of taeniae of fourth ventricle.

**cornute** (kôrnût') *a.* [L. *cornutus, horned.*] With horn-like processes.

**corolla** (kôrôl'â) *n.* [L. *corolla, small crown.*] The petals of a flower.

**corollaceous** (kôr'ôlâ'shûs) *a.* [L. *corolla, crown.*] *Pert.* a corolla.

**corolliferous** (kôr'ôlif'êrûs) *a.* [L. *corolla, small crown; ferre, to bear.*] Having a corolla.

**corona** (kôrô'nâ) *n.* [L. *corona, crown.*] A cup-shaped body formed by union of scales on perianth leaves, as in daffodil; theca and arms of a crinoid; echinoid test excepting apical and antapical plates; ciliated disc or circular band of certain animals; head or upper portion of any structure.

**corona radiata**,—layer of cells surrounding mammalian egg; fibres of internal capsule of brain.

**coronal** (kôr'ônâl) *a.* [L. *corona, crown.*] *Pert.* corona; *appl.* suture between frontal and parietal bones; situated in the coronal sutural plane; *appl.* later roots of grasses, *opp.* seminal.

**coronary** (kôr'ônârt) *a.* [L. *corona, crown.*] Crown-shaped or crown-like; encircling; *appl.* arteries, bones, sinus, ligaments, plexus, vein.

**coronary arteries**,—arteries supplying tissue of heart; labial arteries.

**coronary bone**,—a small conical bone in mandible of reptiles; small pastern bone of horse.

**coronary sinus**,—channel receiving

most cardiac veins and opening into right auricle.

**coronate** (kôr'ônât) *a.* [L. *corona, crown.*] Having a corona; having a row of tubercles encircling a structure, or mounted on whorls of spiral shells.

**coronet** (kôr'ônêt) *n.* [L. *corona, crown.*] The burr of an antler.

**coronoid** (kôrô'noid) *a.* [Gk. *koronis, crook-beaked; eidos, form.*] Shaped like a beak; *appl.* processes. [L. *corona, crown.*] *n.* Coronary bone of reptiles.

**coronula** (kôrôn'ulâ) *n.* [*Dim. of L. corona, crown.*] A group of cells forming a crown on the oosphere, as in Charophyta.

**corpora** (kôr'pôra) *n. plu.* [L. *corpus, body.*] Bodies. *See* corpus.

**corpora adiposa**,—fat-bodies, *q.v.*

**corpora albicantia**,—white bodies or scars formed in ovarian follicle after disintegration of luteal cells;

**corpora mamillaria**, ganglia below posterior part of third ventricle.

**corpora allata**,—paired ovoid whitish endocrine glands in insects.

**corpora amylacea**,—brain sand.

**corpora bigemina**,—the optic lobes of vertebrate brain, corresponding to the superior colliculi of corpora quadrigemina of mammals.

**corpora cardiaca**,—neuroglandular bodies between cerebral ganglia and corpora allata, in some insects.

**corpora cavernosa**,—erectile masses of tissue, forming anterior part of body of penis; erectile tissue of clitoris.

**corpora mamillaria**,—two white bodies enclosing grey matter in hypothalamus, beneath floor of third ventricle; corpora albicantia.

**corpora quadrigemina**,—four rounded eminences which form dorsal part of mesencephalon.

**corpus** (kôr'pûs) *n.* [L. *corpus, body.*] Body; any fairly homogeneous structure which forms part of an organ; *plu.* corpora.

**corpus albicans**,—white tissue replacing corpus luteum in non-pregnancy.

**corpus callosum**,—the broad transverse band of white substance connecting the cerebral hemispheres.

**corpus fibrosum**,—fibrous tissue remaining after disintegration of corpus luteum.

**corpus geniculatum**, — geniculate body, *q.v.*

**corpus haemorrhagicum**, — body developed from ruptured Graafian follicle around blood clot, and later developing into corpus luteum.

**corpus luteum**,—the glandular body developed from a Graafian follicle after extrusion of ovum; yellow body.

**corpus spongiosum**, — a mass of erectile tissue forming posterior wall of penis; corpus cavernosum urethrae.

**corpus sterni**,—sternebrae fused into a single mesosternal bone; the gladiolus.

**corpus striatum**,—a mass of grey matter containing white nerve fibres and consisting of the caudate nucleus which projects into the lateral ventricle, and of the lenticular nucleus.

**corpuscle** (kôr'pûsl, kôrpûs'l) *n.* [L. *corpusculum*, small body.] A protoplasmic cell, floating freely in a fluid, or embedded in a matrix; any minute particle, as in a cell.

**correlation** (kôr'êlâ'shûn) *n.* [L.L. *correlatio*, relationship.] Mutual relationship; proportional growth; interdependence of characters, particularly of quantitative characters, measured by correlation coefficient which is plus or minus one if characters are exactly inter-related, and zero if entirely unrelated; combination of nervous impulses in sensory centres, resulting in adaptive reactions.

**correlator** (kôr'êlâtôr) *n.* [L.L. *correlatio*, relationship.] A diffusible substance correlating activities of coleoptile tip and hypocotyl; auxin, *q.v.*

**corrugator** (kôr'oogâtôr) *a.* [L. *cum*, together; *rugare*, to wrinkle.]

Wrinkled or wrinkling; *appl.* muscles.

**cortex** (kôr'têks) *n.* [L. *cortex*, bark.] The extrastelar fundamental tissue of the sporophyte; outer or more superficial part of an organ.

**cortical** (kôr'tikâl) *a.* [L. *cortex*, bark.] *Pert.* the cortex.

**corticate** (kôr'tikât) *a.* [L. *cortex*, bark.] Having a special outer covering.

**corticiferous** (kôr'tîsîf'êrûs) *a.* [L. *cortex*, bark; *ferre*, to carry.] Forming or having a bark-like cortex.

**corticolous** (kôrtik'ôlûs) *a.* [L. *cortex*, bark; *colere*, to inhabit.] Inhabiting, or growing on, bark.

**corticosterone**,—the active constituent of adrenal cortical hormone;  $C_{21}H_{30}O_4$ .

**corticostriate** (kôr'tîkôstrî'ât) *a.* [L. *cortex*, bark; *stria*, channel.] *Appl.* fibres which join corpus striatum to cerebral cortex.

**corticotrophic**, **corticotropic**, — adrenocorticotrophic, *q.v.*

**cortin** (kôr'tîn) *n.* [L. *cortex*, bark.] Adrenal cortex extract, containing cortical hormones.

**cortina** (kôrtê'nâ) *n.* [L. *cortina*, curtain.] The velum in some agarics.

**cortinate** (kôr'tînât) *a.* [L. *cortina*, curtain.] Having a velum; of a cobweb-like texture.

**Corti's organ** [*A. Corti*, Italian histologist]. The organon spirale, on inner portion of membrana basilaris of ear.

**Corti's rods**,—double row of arching rods based on basilar membrane and forming the spiral tunnel of Corti.

**coruscation** (kôruskâ'shûn) *n.* [L. *coruscatio*, flash.] Twinkle, rapid fluctuation in a flash or oscillation in light emission, as of fire-flies.

**corymb** (kôr'imb) *n.* [Gk. *korymbos*, cluster of flowers.] A raceme with lower pedicels elongated so that the top is nearly flat.

**corymbose** (kôrim'bôs) *a.* [Gk. *korymbos*, cluster of flowers.] *Pert.* or like a corymb; arranged in a corymb; corymbous.

**cosmine** (kós'mín) *n.* [Gk. *kosmios*, regular.] The outer layer of dentine-like material in cosmoid and ganoid scales.

**cosmoid** (kós'moid) *a.* [Gk. *kosmios*, regular; *eidos*, form.] Having an outer periodically resorbed layer of cosmine, *appl.* dermal bones, scales, and lepidotrichia in Crossopterygii.

**cosmopolitan** (kózmöpöl'itän), **cosmopolite** (kózmöpöl'it) *a.* [Gk. *kosmos*, world; *polites*, citizen.] World-wide in distribution.

**costa** (kós'tä) *n.* [L. *costa*, rib.] A rib; anything rib-like in shape, as a ridge on shell, coral, etc.; anterior vein, or margin, of insect wing; comb-rib or swimming-plate of Ctenophora; structure at base of undulating membrane in Trichomonadidae. *Plu.* costae.

**costaeform** (kós'tēförm) *a.* [L. *costa*, rib; *forma*, shape.] Rib-like; *appl.* unbranched parallel leaf-veins.

**costal** (kós'täl) *a.* [L. *costa*, rib.] *Pert.* ribs or rib-like structures; *appl.* bony shields of Chelonia; *pert.* costa of insect wing; *pert.* primary brachial series in Crinoids; *pert.* a main rib.

**costalia** (köstäl'liä) *n. plu.* [L. *costa*, rib.] The supporting plates in theca of Cladoidea.

**costate** (kós'tät) *a.* [L. *costa*, rib.] With one or more longitudinal ribs; with ridges or costae.

**coterminous** (kötēr'minūs) *a.* [L. *cum*, with; *terminus*, end.] Of similar distribution; bordering on.

**cotyledon** (köt'ilē'dōn) *n.* [Gk. *kotyle*, cup.] The seed-leaf, primary or first leaf of an embryonic sporophyte; a patch of villi on mammalian placenta.

**cotyledonary** (köt'ilē'dōnärī) *a.* [Gk. *kotyle*, cup.] *Pert.* cotyledons; with villi grouped in cotyledons, *appl.* placenta.

**cotyloid** (köt'iloid) *a.* [Gk. *kotyle*, cup; *eidos*, form.] Cup-shaped; *pert.* the acetabular cavity.

**cotylorhous** (köt'ilōf'ōrūs) *a.* [Gk. *kotyle*, cup; *pherein*, to bear.] With a cotyledonary placenta.

**cotype** (kō'tip) *n.* [L. *cum*, with; *typus*, image.] An additional type specimen, frequently collected in same place at same time, or a specimen from a description of which, along with others, the type is defined; syntype.

**covariation** (kō'vāriā'shūn) *n.* [L. *con*, with; *varius*, diverse.] Correlation, *q.v.*

**cover scales**,—small scales arranged spirally and developed directly on the axis of a cone of Coniferae; bract scales.

**covert** (kūv'ért) *n.* [F. *couvrir*, to cover.] *Appl.* feathers covering bases of quills in birds.

**cowled** (kowld) *a.* [L. *cucullus*, hood.] Furnished with or shaped like a hood.

**Cowper's glands** [W. Cowper, English surgeon]. Bulbo-urethral glands, *q.v.*

**coxa** (kōk'sä) *n.* [L. *coxa*, hip.] Proximal joint of leg of an insect or arachnid.

**coxal** (kōk'säl) *a.* [L. *coxa*, hip.] *Pert.* the coxa; *appl.* glands; *pert.* the hip.

**coxite** (kōk'sit) *n.* [L. *coxa*, hip.] One of paired lateral plates in contiguity with insect sternum; limb base bearing stylus in Thysanura.

**coxopleurite**,—catapleurite, *q.v.*

**coxopodite** (kōks'öpōdit) *n.* [L. *coxa*, hip; Gk. *pous*, foot.] The proximal part of protopodite of crustacean limb; coxa of spiders.

**coxosternum** (kōk'söstēr'nūm) *n.* [L. *coxa*, hip; *sternum*, breast-bone.] Plate formed by fusion of coxites and sternum; vinculum, in Lepidoptera.

**crampon** (kräm'pōn) *n.* [O.H.G. *chramph*, crooked.] An aerial root, as in ivy.

**cranial** (krä'nial) *a.* [Gk. *kranion*, skull.] *Pert.* skull, or that part which encloses the brain; *appl.* bones, fossae, nerves, muscles, blood-vessels, etc.

**craniate** (krä'niat) *a.* [Gk. *kranion*, skull.] Having a skull.

**cranidium** (krānid'fūm) *n.* [Gk. *kranion*, skull; *idion*, *dim.*] Glabella together with fixed genae, in trilobites.

**cranihaemal** (krā'nihē'māl) *a.* [Gk. *kranion*, skull; *haima*, blood.] *Appl.* anterior lower portion of a sclerotome.

**cranineural** (krā'ninūrāl) *a.* [Gk. *kranion*, skull; *neuron*, nerve.] *Appl.* anterior upper portion of a sclerotome.

**craniology** (krā'niöl'ōji) *n.* [Gk. *kranion*, skull; *logos*, discourse.] The study of the skull.

**craniometry** (krā'niöm'ētri) *n.* [Gk. *kranion*, skull; *metron*, measure.] The science of the measurement of skulls.

**cranosacral** (krā'niösā'krāl) *a.* [Gk. *kranion*, skull; *L. sacer*, sacred.] *Pert.* skull and sacrum; *appl.* nerves, the parasympathetic system.

**cranium** (krā'niūm) *n.* [Gk. *kranion*; *L. cranium*, skull.] The skull of any craniate, or more particularly, that part enclosing the brain.

**craspedodromous** (krās'pēdōd'rō-mūs) *a.* [Gk. *kraspedon*, edge; *dromein*, to run.] With nerves running directly from mid-rib to margin.

**craspedote** (krās'pēdōt) *a.* [Gk. *kraspedon*, edge.] Having a velum.

**craspedum** (krās'pēdūm) *n.* [Gk. *kraspedon*, edge.] A mesenteric filament of sea-anemones.

**crassula** (krās'ūlā) *n.* [*L. crassus*, thick.] Thickened bar on middle lamella between two bordered pits in tracheids of wood of conifers; bar of Sanio. *Plu.* crassulae.

**craticular** (krātīk'ūlār) *a.* [*L. craticula*, gridiron.] Crate-like; *appl.* stage in life-history of a diatom where new valves are formed before the old are lost.

**creatine** (krē'ätin) *n.* [Gk. *kreas*, flesh.] A nitrogenous substance found in muscles, brain, and blood of vertebrates;  $C_4H_9O_2N_3$ .

**creatinine** (krē'ätinīn) *n.* [Gk. *kreas*,

flesh.] A katabolic product in muscle and other tissues, excreted in urine;  $C_4H_7ON_3$ .

**cremaster** (krēmās'tēr) *n.* [Gk. *kreastos*, hung.] A thin muscle along the spermatic cord; a stout terminal abdominal spine in subterranean insect pupae; the anal hooks for suspension pupae.

**cremocarp** (krēm'ōkârp) *n.* [Gk. *kremanumai*, to hang; *karpōs*, fruit.] An inferior, dry, indehiscent, bilocular, two-seeded fruit.

**crena** (krē'nā) *n.* [*L. crena*, notch.] Notch in a crenate margin, as of leaf; cleft, as anal cleft; deep groove, as longitudinal sulcus of heart.

**crenate** (krē'nāt) *a.* [*L. crena*, notch.] With scalloped margin.

**crenation** (krē'nā'shūn) *n.* [*L. crenatus*, notched.] A scalloped margin, or rounded tooth, as of leaf; crenature; notched or wrinkled appearance, as of erythrocytes exposed to hypertonic solutions.

**crenulate** (krē'nūlāt) *a.* [*Dim. of L. crena*, notch.] With margins minutely crenate; crenellated, crenulated.

**crepis** (krē'pis) *n.* [Gk. *krepis*, foundation.] The fundamental spicule by deposition of silica upon which a desma is formed.

**crepitation** (krēpitā'shūn) *n.* [*L. crepitare*, to crackle.] In insects, the discharge of a fluid with an explosive sound.

**crepuscular** (krēpūs'kūlār) *a.* [*L. crepusculum*, dusk.] *Pert.* dusk; flying before sunrise or in twilight.

**crescent** (krēs'ēnt) *n.* [*L. crescere*, to grow.] A crescentic structure.

**crescentiform** (krēsēn'tifōrm) *a.* [*L. crescere*, to grow; *forma*, shape.] Crescent-shaped; crescentic; *appl.* mouth of Sipunculoidea.

**crescents of Gianuzzi**, — small crescent-shaped bodies of the salivary glands; demilunes of Heidenhain.

**crest** (krĕst) *n.* [L. *crista*, crest.] A ridge on a bone; a fleshy longitudinal ridge as in newts; crown or feather tuft on head of birds.

**Cretaceous** (krĕtā'shūs) *a.* [L. *creta*, chalk.] *Appl.*, and *pert.*, the last period of the Mesozoic era.

**cribellum** (kribĕl'ūm) *n.* [L. *dim.* of *cribrum*, sieve.] A plate perforated by openings of silk ducts in certain spiders.

**cribriform** (krib'rifōrm) *a.* [L. *cribrum*, sieve; *forma*, shape.] Sieve-like.

**cribriform organ**, — folded membrane carrying papillae in interradial angles of certain starfishes.

**cribriform plate**, — the portion of ethmoid, or of mesethmoid, perforated by many foramina for exit of olfactory nerves; lamina cribrosa.

**criroid** (kri'koid) *a.* [Gk. *krikos*, ring; *eidos*, form.] Ring-like; *appl.* cartilage in larynx, articulating with thyroid and arytaenoid cartilages; *appl.* placenta lacking villi on central part of disc, as in certain Edentata.

**crinome** (krin'ōm) *n.* [L. *crinis*, hair.] Network formed in cytoplasm by basophil substances reacting to vital staining.

**criocone** (kri'ōkōn) *a.* [Gk. *krios*, ram; *kōnos*, cone.] With uncoiled spiral shaped like ram's horn; *appl.* shell of certain ammonites.

**crissal** (kris'āl) *a.* [L. *crissare*, to move haunches.] *Pert.* the crissum.

**criss-cross**, — *appl.* inheritance when offspring resemble the parent of the opposite sex.

**crissum** (kris'ūm) *n.* [L. *crissare*, to move haunches.] The circumcloacal region of a bird; vent-feathers or lower tail-coverts.

**crista** (kris'tā) *n.* [L. *crista*, crest.] A crest or ridge; projection from ectoloph into median valley in lophodont molars; a fine membrane attached to body of certain spirochaetes; ligule of palm-leaves.

**crista acustica**, — thickening, covered with neuroepithelium, of mem-

brane lining ampullae of semi-circular canals; a chordotonal structure in Orthoptera.

**crista galli**, — anterior median process of cribriform plate.

**crista urethralis**, — verumontanum, *q.v.*

**cristate** (kris'tāt) *a.* [L. *cristatus*, crested.] Crested; cristiform, shaped like a crest.

**crochet** (krōshā') *n.* [F. *crochet*, small hook.] The projection of the protoloph in lophodont molars; a balancer in larval salamanders; a larval locomotory hook in insects.

**crop** (krōp) *n.* [M.E. *croppē*, craw.] Sac-like dilatation of gullet of a bird; a similar structure in alimentary canal of insect or worm; ingluvies.

**crosier** (krō'zhyēr) *n.* [M.E. *croce*, crook.] Circinate young frond of fern; hook formed by terminal cells of ascogenous hyphae; flat spiral shell, as of Spirula.

**cross** (krōs) *n.* [M.E. *crois*, cross.] An organism produced by mating parents of different breeds. *v.* To hybridise.

**crossing - over**, — interchange of corresponding chromosome segments by homologous pairs of chromosomes during maturation.

**crossover**, — a chromatid formed as a result of crossing-over.

**crotaphite** (krōt'āfit) *n.* [Gk. *krotaphos*, side of forehead.] The temporal fossa.

**crotchet** (krōch'ēt) *n.* [F. *crochet*, small hook.] A curved chaeta, notched at the end; uncinus; clavus, in spiders.

**crown** (krown) *n.* [L. *corona*, crown.] The exposed part of a tooth, especially the grinding surface; distal part of antler; crest; head; cup and arms of a crinoid; corona, *q.v.*; leafy upper part of a tree.

**crozier**, — crosier, *q.v.*

**cruciate** (kroo'shiāt, kroo'siāt) *a.* [L. *crux*, cross.] Cruciform; with leaves or petals in form of a cross; X-shaped or + - shaped, *appl.* muscles, ligaments; crucial.

**cruciform** (kroos'ifôrm) *a.* [L. *crux*, cross; *forma*, shape.] Arranged like the points of a cross; *appl.* division, promitosis in Plasmodiophorales.

**cruor** (kroo'ôr) *n.* [L. *cruor*, blood.] The clots in coagulated blood.

**cruorin** (kroo'ôrîn) *n.* [L. *cruor*, blood.] Haemoglobin.

**crura** (kroo'ră) *n. plu.* [L. *crura*, legs.] The shanks; leg-like or columnar structures; lumbar part of diaphragm muscle fibres; proximal processes of corpora cavernosa penis; branches of incus and stapes; pillars of subcutaneous inguinal ring; posterior pillars of fornix; crura cerebri, *q.v.*

**crura cerebri**,—the cerebral peduncles, two cylindrical masses forming the ventrolateral portion of mid-brain.

**crural** (kroo'răl) *a.* [L. *crus*, leg.] *Peri.* the thigh.

**crureus** (kroor'ûs) *n.* [L. *crus*, leg.] Vastus intermedius muscle of thigh.

**crus** (krûs) *n.* [L. *crus*, leg.] The shank; any leg-like organ. *Plu.* crura.

**crusta** (krûs'tă) *n.* [L. *crusta*, shell.] Ventral part or base or pes of cerebral peduncles; cement layer of teeth, crusta petrosa.

**crustaceous** (krüstă'shûs) *a.* [L. *crusta*, shell.] With crustacean characteristics; crustose, *q.v.*

**crustose** (krûs'tôs) *a.* [L. *crusta*, shell.] Forming crusts on substratum, *appl.* lichens.

**cryophil** (kri'ôfil) *a.* [Gk. *kryos*, chill; *philein*, to love.] Thriving at a low temperature; cryophilic.

**cryoplankton** (kri'ôplăngk'tôn) *n.* [Gk. *kryos*, frost; *plăngktos*, wandering.] Glacial and polar plankton; algal communities thriving on snow.

**cryoscopic** (kri'ôskôp'ik) *a.* [Gk. *kryos*, frost; *skopein*, to view.] *Appl.* method of determining osmotic pressure, using a freezing-point depression.

**crypt** (kript) *n.* [Gk. *kryptos*, hidden.]

A simple glandular tube or cavity; pit of stoma; depression in uterine mucous membrane.

**cryptic** (krip'tik) *a.* [Gk. *kryptos*, hidden.] *Appl.* protective coloration facilitating concealment; *appl.* polymorphism due to presence of recessive genes; *appl.* species extremely similar as to external appearance but which do not normally interbreed.

**cryptocarp** (krip'tôkârp) *n.* [Gk. *kryptos*, hidden; *karpōs*, fruit.] A fruit-like structure, the sporophyte phase in red algae

**cryptogam** (krip'tôgăm) *n.* [Gk. *kryptos*, hidden; *gamos*, union.] A plant without apparent reproductive organs; a spore-plant; *cf.* phanerogam.

**cryptogene** (krip'tôjên) *a.* [Gk. *kryptos*, hidden; *genos*, origin.] Of unknown descent; having an indeterminate phylogeny.

**cryptohaplomitosis** (krip'tôhăp'lô-mitô'sis) *n.* [Gk. *kryptos*, hidden; *haploos*, simple; *mitos*, thread.] Type of cell-division in some flagellates where chromatin divides into two masses which pass to opposite poles without spireme-formation.

**cryptomere** (krip'tômēr) *n.* [Gk. *kryptos*, hidden; *meros*, part.] A hidden recessive hereditary factor.

**cryptomitosis** (krip'tômîto'sis) *n.* [Gk. *kryptos*, hidden; *mitos*, thread.] Division of unicellular organisms, in which chromatin assembles in the equatorial region without apparent chromosome formation.

**cryptoneurous** (krip'tônû'rûs) *a.* [Gk. *kryptos*, hidden; *neuron*, nerve.] With no definite or distinct nervous system.

**cryptophyte** (krip'tôfit) *n.* [Gk. *kryptos*, hidden; *phyton*, plant.] A plant perennating by means of rhizomes, corms, or bulbs under ground, or of under water buds.

**cytoplasm** (krip'tôplăzm) *n.* [Gk. *kryptos*, hidden; *plasma*, form.] The non-granular portion of cytoplasm.

**cryptoptile** (krip'tótil, -ptil) *n.* [Gk. *kryptos*, hidden; *ptilon*, feather.] A feather filament, developed from papilla.

**cryptorchid** (kriptór'kid) *a.* [Gk. *kryptos*, hidden; *orchis*, testis.] Having testes abdominal in position.

**cryptorhetic** (krip'torét'ík) *a.* [Gk. *kryptos*, hidden; *rhein*, to flow.] Secreting internally; endocrine.

**cryptosolenial** (krip'tösölē'niāl) *a.* [Gk. *kryptos*, hidden; *solen*, channel.] *Appl.* region of attachment of Malpighian vessels to hind-gut in certain Coleoptera.

**cryptostomata** (krip'töstöm'ätä) *n. plu.* [Gk. *kryptos*, hidden; *stoma*, mouth.] Non-sexual conceptacles in Fucaceae.

**cryptozoic** (krip'tözō'ík) *a.* [Gk. *kryptos*, hidden; *zoon*, animal.] *Appl.* fauna dwelling in darkness, or under stones, bark, etc.

**cryptozoite** (krip'tözō'it) *n.* [Gk. *kryptos*, hidden; *zoon*, animal.] Stage of sporozoite when living in tissues before entering blood.

**crypts of Lieberkühn**,—*see* Lieberkühn's crypts.

**crystallin** (kris'tälín) *n.* [Gk. *krysallos*, ice.] A globulin which is the principal constituent of lens of eye.

**crystalline** (kris'tälín) *a.* [Gk. *krysallos*, crystalline.] Transparent; *appl.* various structures.

**crystalline style**,—a proteid hyaline rod with amylolytic function, in alimentary canal of some molluscs.

**crystalloid** (kris'táloid) *n.* [Gk. *krysallos*, ice; *eidōs*, form.] A substance which in solution readily diffuses through an animal membrane; *opp.* colloid; a protein crystal found in certain plant cells.

**crystal-sand**,—a deposit of minute crystals of calcium oxalate, as in Solanaceae.

**crystal-spore**,—an isospore containing a crystal, of Radiolaria.

**ctenophyte** (tin'öfit, ktin'öfit) *n.* [Gk. *kleinein*, to kill; *phyton*, plant.] A parasitic plant, *e.g.* fungus, which destroys its host.

**ctene** (tēn, ktēn) *n.* [Gk. *kteis*, comb.] The swimming-plates of ctenophores.

**ctenidium** (tēnīd'iūm, ktēnīd'iūm) *n.* [Gk. *kteis*, comb; *idion*, dim.] The respiratory apparatus in molluscs, feather-like or comb-like in appearance; a row of spines forming a comb in some insects.

**ctenocyst** (tēn'ösist, ktēn'ösist) *n.* [Gk. *kteis*, comb; *kystis*, bladder.] Aboral sense organ of Ctenophora.

**ctenoid** (tēn'oid, ktēn'oid) *a.* [Gk. *kteis*, comb; *eidōs*, form.] With comb-like margin, as scales.

**ctenophoral** (tēnōf'öräl, ktēnōf'öräl) *a.* [Gk. *kteis*, comb; *pherein*, to bear.] Supplied with swimming-plates.

**ctetology** (tētöl'öjī, ktē-) *n.* [Gk. *ktetos*, acquired; *logos*, discourse.] Aspect of biology concerned with acquired characters.

**ctetosome** (tē'tösöm, ktē') *n.* [Gk. *ktetos*, acquired; *soma*, body.] A supernumerary chromosome associated with a sex chromosome during meiosis.

**cubical** (kū'bikāl) *a.* [L. *cubus*, cube.] *Appl.* cells as long as broad.

**cubital** (kū'bital) *a.* [L. *cubitalis*, of elbow.] *Pert.* the ulna or cubitus. *n.* A secondary wing-quill, connected with the ulna.

**cubitus** (kū'bītūs) *n.* [L. *cubitus*, elbow.] The ulna, forearm; primary vein in an insect wing.

**cuboid** (kū'boid) *a.* [Gk. *kyboeides*, cube-like.] Nearly cubic in shape. *n.* Outermost of distal tarsal bones.

**cuboidal** (kūboid'äl) *a.* [Gk. *kyboeides*, cube-like.] *Pert.* the cuboid.

**cucullate** (kū'külāt, kūkül'āt) *a.* [L. *cucullus*, hood.] With hood-like sepals or petals; with prothorax hood-shaped.

**cucullus** (kūkül'ūs) *n.* [L. *cucullus*, hood.] A hood-shaped structure; upper part of harpe, in Lepidoptera.

**cuiller** (kwē'yā) *n.* [F. *cuiller*, spoon.] Spoon-like terminal portion of male insect clasper.



**cuirass** (kwīrās') *n.* [F. *cuirasse*, leathern jacket.] Bony plates or scales arranged like a cuirass; a lorica, *q.v.*

**culm** (kül'm) *n.* [L. *culmus*, stalk.] The stem of grasses and sedges.

**culmen** (kül'mēn) *n.* [L. *culmen*, summit.] Median longitudinal ridge of a bird's beak; anterior raised part of monticulus.

**cultellus** (kül'tēl'ūs) *n.* [L. *cultellus*, little knife.] A sharp knife-like organ, one of mouth-parts of certain blood-sucking flies.

**culture** (kül'tūr) *n.* [L. *cultura*; *colere*, to till.] The cultivation of micro-organisms or tissues in prepared media.

**cumulose** (kū'mülōs) *a.* [L. *cumulus*, heap.] *Appl.* deposits consisting chiefly of plant remains, *e.g.* peat.

**cumulus** (kū'mülūs) *n.* [L. *cumulus*, heap.] The mass of epithelial cells bulging into cavity of an ovarian follicle and in which ovum is embedded; cumulus oophorus, discus proligerus.

**cuneate** (kū'nēāt) *a.* [L. *cuneatus*, wedge-shaped.] Wedge-shaped; *appl.* leaves with broad abruptly-pointed apex and tapering to the base; *appl.* a fasciculus and tubercle formed by a grey nucleus at posterior end of rhomboid fossa of medulla oblongata.

**cuneiform** (kūnē'fōrm) *a.* [L. *cuneus*, wedge; *forma*, shape.] Wedge-shaped; *appl.* distal tarsal bones; *appl.* a carpal bone, os triquetrum; *appl.* two small cartilages of larynx.

**cuneus** (kū'nēūs) *n.* [L. *cuneus*, wedge.] A division of elytron of certain insects; a wedge-shaped area of the occipital lobe between calcarine fissure and medial part of parieto-occipital fissure.

**cup** (kūp) *n.* [A.S. *cuppe*, cup.] Any structure resembling a cup.

**cupula** (kū'pūlā) *n.* [L. *cupula*, little tub.] The bony apex of cochlea; the part of pleura over the apex of lung; cupule, *q.v.*

**cupulate** (kū'pūlāt) *a.* [L. *cupula*,

little tub.] Cup-shaped; *appl.* certain aecidia.

**cupule** (kūp'ūl) *n.* [L. *cupula*, little tub.] The involucre of female flower of oak, etc.; the gemmae-bearing cup of Marchantia; a small sucker of various animals.

**curviserial** (kūr'visē'riāl) *a.* [L. *curvus*, curve; *series*, row.] *Appl.* phyllotaxis in which divergence is such that orthostichies themselves are slightly twisted spirally.

**cushion** (koosh'ūn) *n.* [M.E. *cuischen*, cushion.] The central thick region in prothallus of fern; *appl.* habitus of many plants, as in certain alpine species; torus tubarius, prominence behind pharyngeal opening of Eustachian tube; tubercle or elevation of laryngeal surface of epiglottis; embryonic endocardial thickening of wall of atrial canal.

**cuspid** (kūsp) *n.* [L. *cuspis*, point.] A prominence, as on teeth; a sharp point.

**cuspidate** (kūs'pidāt) *a.* [L. *cuspidare*, to make pointed.] Terminating in a point; *appl.* leaves, teeth.

**cutaneous** (kūtā'nēūs) *a.* [L. *cutis*, skin.] *Pert.* the skin.

**cuticle** (kū'tīkl) *n.* [L. *cutis*, skin.] An outer skin or pellicle; the epidermis; cuticula.

**cuticular** (kū'tīk'ulār) *a.* [L. *cutis*, skin.] *Pert.* the cuticle or external integument; *appl.* transpiration through the cuticle.

**cuticularisation** (kū'tīk'ulārīzā'shūn) *n.* [L. *dim.* of *cutis*, skin.] Cutinisation in external layers of epidermal cells.

**cutin** (kū'tīn) *n.* [L. *cutis*, skin.] A substance allied to cellulose found in external layers of thickened epidermal cells.

**cutinisation** (kū'tīnīzā'shūn) *n.* [L. *cutis*, skin.] The deposition of cutin in cell-wall, thereby forming a cuticle.

**cutis** (kū'tis) *n.* [L. *cutis*, skin.] The corium, or deeper layer of the skin.

**cutocellulose** (kū'tōsēl'ulōs) *n.* [L. *cutis*, skin; *cellula*, small cell.] Cellulose with cutin, as in plant epidermis.

**cutose** (kū'tōs) *n.* [L. *cutis*, skin.]  
Cutin, *q.v.*

**Cuvier, ducts of** [G.L.C.F.D. Cuvier, French comparative anatomist]. Short veins opening into sinus venosus, and formed by union of anterior and posterior cardinal veins.

**Cuvierian organs**,—glandular tubes extending from cloaca of holothurians.

**cyanic** (siān'ik) *a.* [Gk. *kyanos*, dark blue.] Blue, bluish; *appl.* flowers, birds' eggs.

**cyanin** (si'ānin) *n.* [Gk. *kyanos*, cornflower.] The blue pigment or anthocyanin of the cornflower.

**cyanogenesis** (si'ānōjēn'ēsis) *n.* [Gk. *kyanos*, blue; *genesis*, origin.] The elaboration of hydrocyanic acid, prussic acid, as in certain plants.

**cyanophil** (siān'ōfil) *a.* [Gk. *kyanos*, blue; *philein*, to love.] With special affinity for blue or green stains; *appl.* cell structure.

**cyanophycin** (si'ānōfī'sin) *n.* [Gk. *kyanos*, blue; *phykos*, seaweed.] Protein reserve forming granules in peripheral region of cells in blue-green algae;  $\beta$  granules.

**cyanophyll** (siān'ōfil) *n.* [Gk. *kyanos*, blue; *phyllon*, leaf.] A bluish-green colouring matter in plants.

**cyathium** (si'āthiūm) *n.* [Gk. *kyathos*, cup.] The peculiar inflorescence in Euphorbia, a cup-shaped involucre with stamens and stalked gynoeceum, each stamen and the gynoeceum being a separate flower.

**cyathozoid** (si'āthōzō'oid) *n.* [Gk. *kyathos*, cup; *zoon*, animal; *eidos*, shape.] The primary zooid in certain tunicates.

**cyathus** (si'āthūs) *n.* [Gk. *kyathos*, cup.] A small cup-shaped organ; the gemma-cup of Marchantia.

**cycle** (sikl) *n.* [Gk. *kyklos*, circle.] The circulation of a fluid through a definite series of vessels; recurrent series of phenomena, as life cycle, ovarian cycle, etc.

**cyclic** (si'klik) *a.* [Gk. *kyklos*, circle.] Having parts of flower arranged in whorls; cyclical; periodic.

**cyclocoelic** (si'klōsē'lik) *a.* [Gk. *kyklos*, circle; *koilia*, intestines.] With the intestine coiled in one or more distinct spirals.

**cyclogenous** (si'klōj'ēnūs) *a.* [Gk. *kyklos*, circle; *gennaein*, to produce.] Exogenous; *appl.* a stem growing in concentric circles.

**cyclogeny** (si'klōj'ēni) *n.* [Gk. *kyklos*, circle; *genos*, generation.] Production of a succession of different morphological types in a life cycle.

**cycloid** (si'kloid) *a.* [Gk. *kyklos*, circle; *eidos*, shape.] *Appl.* scales with evenly curved free border.

**cyclomorial** (si'klōmōr'īāl) *a.* [Gk. *kyklos*, circle; *morion*, constituent part.] *Appl.* scales, growing in area by apposition of marginal zones, as in Palaeozoic elasmobranchs.

**cyclomorphosis** (si'klōmōr'fōsis) *n.* [Gk. *kyklos*, circle; *morphosis*, form.] A cycle of changes in form, as seasonal changes in daphnids.

**cyclopean** (siklopē'ān), **cyclopic** (siklop'ik) *a.* [Gk. *kyklos*, circle; *ops*, eye.] *Appl.* single median eye developed under certain artificial conditions instead of the normal pair.

**cyclosis** (siklō'sis) *n.* [Gk. *kyklosis*, whirling round.] Circulation, as of protoplasm within a cell.

**cyclospermous** (si'klōspēr'mūs) *a.* [Gk. *kyklos*, circle; *sperma*, seed.] With embryo coiled in a circle or spiral.

**cyclospondylic** (si'klōspōndil'ik) *a.* [Gk. *kyklos*, circle; *sphondylos*, vertebra.] *Appl.* centra in which the internal calcareous matter is confined to the middle zone.

**cyclospondylous** (si'klōspōn'dilūs) *a.* [Gk. *kyklos*, circle; *sphondylos*, vertebra.] *Appl.* vertebra formed of successive concentric layers of cartilage; also cyclospondylic.

**cyesis** (siē'sis) *n.* [Gk. *kyesis*, conception.] Pregnancy.

**cylindrical** (silin'drikāl) *a.* [Gk. *kylindros*, cylinder.] *Appl.* leaves rolled on themselves, or to solid cylinder-like leaves; *appl.* a type of silk gland in spiders; tubuliform.

**cymba** (sím'hä) *n.* [L. *cymba*, boat.] Upper part of concha of ear.

**cymbiform** (sím'biförm) *a.* [L. *cymba*, boat; *forma*, shape.] Boat-shaped.

**cymbium** (sím'bí'üm) *n.* [Gk. *kymbion*, small boat.] Boat-shaped tarsus of pedipalpus in certain spiders.

**cyme** (sím) *n.* [L. *cyma*, young sprout.] Any determinate inflorescence.

**cymose** (sí'mös) *a.* [L. *cyma*, young sprout.] Sympodially branched, *appl.* inflorescence.

**cymotrichous** (kimót'riküs, sí-) *a.* [Gk. *kyma*, wave; *thrix*, hair.] Having wavy hair.

**cynarrhodium** (sinärö'diüm), **cynarrhodon** (sinäröd'ön) *n.* [Gk. *kyon*, dog; *rhodon*, rose.] An etaerio with achenes placed on concave thalamus.

**cynopodous** (sínöp'ödüs) *a.* [Gk. *kyon*, dog; *pous*, foot.] With non-retractile claws.

**cyphella** (sífel'ä) *n.* [Gk. *kyphella*, hollow of ear.] Small cavity on thallus of certain lichens.

**cyphonautes** (sí'fönót'ez) *n.* [Gk. *kyphos*, bent; *nautes*, sailor.] Young free-swimming larva of certain Polyzoa.

**cypsela** (sípsel'ä) *n.* [Gk. *kyipsele*, hollow vessel.] An inferior bicarpellary achene, as in Compositae.

**cyst** (síst) *n.* [Gk. *kystis*, bladder.] The enclosing membrane round a resting cell or apocyte; a bladder or air vesicle in certain seaweeds; abnormal sac containing fluid.

**cysteine** (sís'tēin) *n.* [Gk. *kystis*, bladder.] A reduction product of cystine, occurring in urinary bladder concretions.

**cystenchyma** (sístēng'kimä) *n.* [Gk. *kystis*, bladder; *engchyma*, infusion.] A parenchyma in sponges with large vesicular cell-structure.

**cystencytes** (sís'ténsits) *n. plu.* [Gk. *kystis*, bladder; *en*, in; *kytos*, hollow.] In sponges, collencytes which have acquired a vesicular structure.

**cystic** (sís'tik) *a.* [Gk. *kystis*, bladder.] *Pert.* a cyst; *pert.* gall-bladder or to urinary bladder.

**cysticeroid** (sís'tisér'koid) *a.* [Gk. *kystis*, bladder; *kerkos*, tail; *eidos*, form.] *Appl.* the bladderworm stage of tapeworms.

**cysticercus** (sís'tisér'küs) *n.* [Gk. *kystis*, bladder; *kerkos*, tail.] The larval form or bladderworm stage of certain tapeworms.

**cysticolous** (sístik'ölüs) *a.* [Gk. *kystis*, bladder; L. *colere*, to inhabit.] Living in a cyst.

**cystid** (sís'tid) *n.* [Gk. *kystis*, bladder; *idion*, *dim.*] A fossil Cystoid.

**cystidiform** (sís'tidiförm) *a.* [Gk. *kystis*, bladder; *idion*, *dim.*; L. *forma*, form.] *Appl.* clavate cells on gill margins in agarics.

**cystidium** (sístid'iüm) *n.* [Gk. *kystis*, bladder; *idion*, *dim.*] A hair-like inflated cell in the hymenial layer of some fungi.

**cystine** (sís'tēn) *n.* [Gk. *kystis*, bladder.] Amino acid found in plants, egg albumin and keratin; dicysteine,  $C_6H_{12}O_4N_2S_2$ .

**cystoarian** (sístöä'riän) *a.* [Gk. *kystis*, bladder; *oarion*, small egg.] *Appl.* gonads when enclosed in coelomic sacs, as in most teleosts. (*opp.* gymnoarian.)

**cystocarp** (sís'tökârp) *n.* [Gk. *kystis*, bladder; *karpós*, fruit.] A cyst arising from carpogonial branch and containing spores, in certain Rhodophyceae; cryptocarp.

**cystocyte** (sís'tösit) *n.* [Gk. *kystis*, bladder; *kytos*, hollow.] Cystenocyte, *q.v.*

**cystogenous** (sístöj'ēnüs) *a.* [Gk. *kystis*, bladder; *-genes*, producing.] Cyst-forming; *appl.* large nucleated cells which secrete the cyst, in cercaria.

**cystolith** (sís'tölith) *n.* [Gk. *kystis*, bladder; *lithos*, stone.] A mass of calcium carbonate, occasionally of silica, formed on ingrowths of epidermal cell walls in some plants; a vesical calculus.

**cyston** (sīs'tōn) *n.* [Gk. *kystis*, bladder.] A dactylozoid modified for excretory purposes, in Siphonophora.

**cystospore** (sīs'tōspōr) *n.* [Gk. *kystis*, bladder; *sporos*, seed.] A carpospore; a cyst containing zoospores.

**cystozoid** (sīs'tōzō'oid) *n.* [Gk. *kystis*, bladder; *zoon*, animal; *eidos*, form.] The body portion of a metacystode, *opp.* acanthozoid.

**cytase** (sī'tās) *n.* [Gk. *kytos*, hollow.] A cellulose digesting or hydrolysing enzyme; alexin.

**cytaster** (sītās'tēr) *n.* [Gk. *kytos*, hollow; *aster*, star.] A star-shaped achromatic figure consisting of attraction-sphere and aster rays; aster, *opp.* karyaster.

**cytes** (sīts) *n. plu.* [Gk. *kytos*, hollow.] Spermatocyte and oocyte stages of germ-cell formation; auxocytes.

**cytoblast** (sī'tōblāst) *n.* [Gk. *kytos*, hollow; *blastos*, bud.] The cell nucleus; a hypothetical unit, *q.v.*

**cytoblastema** (sī'tōblās'tēmā) *n.* [Gk. *kytos*, hollow; *blastema*, growth.] The formative material from which cells were supposed to arise.

**cytocentrum** (sī'tōsēn'trūm) *n.* [Gk. *kytos*, hollow; *kentron*, centre.] Centrosome; idiozome.

**cytochrome** (sī'tōkrōm) *n.* [Gk. *kytos*, hollow; *chroma*, colour.] A chromoprotein essential for oxidation-reduction processes in plant and animal cells; histohaematin; myohaematin.

**cytochylema** (sī'tōkilē'mā) *n.* [Gk. *kytos*, hollow; *chylos*, juice.] Cyto-lymph, *q.v.*

**cytoclesis** (sī'tōklē'sīs) *n.* [Gk. *kytos*, hollow; *klesis*, summons.] The influence of a cell group or placode upon development or differentiation of neighbouring cells; *cf.* organiser.

**cytococcus** (sī'tōkōk'ūs) *n.* [Gk. *kytos*, hollow; *kokkos*, kernel.] The nucleus of a fertilised egg.

**cytocyst** (sī'tōsīst) *n.* [Gk. *kytos*,

hollow; *kystis*, bladder.] The envelope formed by remains of host-cell within which a protozoan parasite multiplies.

**cytode** (sī'tōd) *n.* [Gk. *kytos*, hollow; *eidos*, form.] A non-nucleated protoplasmic mass.

**cytoderis** (sī'tōdērm) *n.* [Gk. *kytos*, hollow; *derma*, skin.] A cell-wall.

**cytodiaeresis** (sī'tōdiē'rēsis) *n.* [Gk. *kytos*, hollow; *diairesis*, division.] Mitosis; karyokinesis.

**cytogamy** (sītōg'āmī) *n.* [Gk. *kytos*, hollow; *gamos*, marriage.] Cell-conjugation.

**cytogenesis** (sī'tōjēn'ēsīs) *n.* [Gk. *kytos*, hollow; *genesis*, descent.] Development or formation of cells.

**cytogenetic** (sī'tōjēnēt'ik) *a.* [Gk. *kytos*, hollow; *genesis*, descent.] *Pert.* cytogenesis; *pert.* cytogenetics; *appl.* map showing location of genes within a chromosome.

**cytogenetics** (sī'tōjēnēt'iks) *n.* [Gk. *kytos*, hollow; *genesis*, descent.] Genetics in relation to cytology; the cytological aspect of genetics.

**cytogenous** (sītōj'énūs) *a.* [Gk. *kytos*, hollow; *genos*, offspring.] Producing cells; *appl.* lymphatic tissue.

**cytoglobin** (sī'tōglō'bīn) *n.* [Gk. *kytos*, hollow; *L. globus*, globe.] A protein which retards coagulation of blood.

**cytohyaloplasma** (sī'tōhī'ālōplāz'mā) *n.* [Gk. *kytos*, hollow; *hyalos*, glass; *plasma*, mould.] The substance of the cytomitome; hyaloplasm.

**cytokinesis** (sī'tōkīnē'sīs) *n.* [Gk. *kytos*, hollow; *kinesis*, movement.] Changes attending general cytoplasm during karyokinesis; the separation of daughter-cells following division of parent cell.

**cytology** (sītōl'ōjī) *n.* [Gk. *kytos*, hollow, hollow vessel; *logos*, discourse.] The science dealing with structure, functions, and life-history of cells.

**cytolymph** (sī'tōlīmf) *n.* [Gk. *kytos*, hollow; *L. lymphā*, water.] Cell-sap; the fluid part of cytoplasm.

- cytolysin** (sī'tōl'ísin) *n.* [Gk. *kytos*, hollow; *lysis*, loosing.] A substance inducing cytolysis.
- cytolysis** (sītōl'ísis) *n.* [Gk. *kytos*, hollow; *lysis*, loosing.] Cell-dissolution; cell-degeneration.
- cytome** (sī'tōm) *n.* [Gk. *kytos*, hollow.] The microsome or cytosome system of a cell.
- cytomeris** (sī'tōmēríz) *n. plu.* [Gk. *kytos*, hollow; *meros*, part.] Cells in Caryotropha formed by division of schizont and giving rise to merozoites; agametoblasts; non-nuclear portions of sperms.
- cytomicrosome** (sī'tōmī'krōsōm) *n.* [Gk. *kytos*, hollow; *mikros*, small; *soma*, body.] A microsome of cytoplasm, *opp.* karyomicrosome.
- cytomitome** (sī'tōmī'tōm) *n.* [Gk. *kytos*, hollow; *mitos*, thread.] The cytoplasmic thread-work.
- cytomorphosis** (sī'tōmōr'fōsis) *n.* [Gk. *kytos*, hollow; *morphosis*, shaping.] The life-history of cells; the series of structural modifications of cells or successive generations of cells; cellular change, as in senescence.
- cyton** (sī'tōn) *n.* [Gk. *kytos*, hollow.] The body of a nerve cell; neurocyton.
- cytophan** (sī'tōfān) *n.* [Gk. *kytos*, hollow; *phaneros*, visible.] Ovoid matrix surrounding karyophans in spironeme and axoneme fibres in infusorian stalk.
- cytopharynx** (sī'tōfār'íngks) *n.* [Gk. *kytos*, hollow; *pharynx*, gullet.] A tube-like structure leading from mouth into endoplasm in certain protozoa.
- cytophil** (sī'tōfil) *a.* [Gk. *kytos*, hollow; *philein*, to love.] *Pert.* haptophorous groups; having an affinity for cells.
- cytophore** (sī'tōfōr) *n.* [Gk. *kytos*, hollow; *phora*, burden.] A cell regarded as bearer of parasitic Sporozoa; central non-nucleated protoplasm in sperm morula; blastophore.
- cytoplasm** (sī'tōplāzm) *n.* [Gk. *kytos*, hollow; *plasma*, mould.] Substance of cell-body exclusive of nucleus; *cf.* karyoplasm.
- cytoproct** (sī'tōprōkt), **cytopyge** (sī'tōpīj') *n.* [Gk. *kytos*, hollow; *proktos*, anus; *pyge*, rump.] A cell-anus.
- cytoreticulum** (sī'tōrētīk'ūlūm) *n.* [Gk. *kytos*, hollow; *L. reticulum*, little net.] The cytoplasmic thread-work; cytomitome; spongioplasm.
- cytosine** (sī'tōsín) *n.* [Gk. *kytos*, hollow.] A cleavage product of nucleic acid;  $C_4H_5N_3O$ .
- cytosome** (sī'tōsōm) *n.* [Gk. *kytos*, hollow; *soma*, body.] The cytoplasmic part of a cell; a microsome, *q.v.*
- cytostome** (sī'tōstōm) *n.* [Gk. *kytos*, hollow; *stoma*, mouth.] A cell-mouth.
- cytotaxis** (sī'tōtāk'sis) *n.* [Gk. *kytos*, hollow; *taxis*, arrangement.] Rearrangement of cells on stimulation.
- cytothesis** (sī'tōth'ēsís) *n.* [Gk. *kytos*, hollow; *thesis*, arranging.] Regenerative tendency of a cell.
- cytotoxin** (sī'tōtōk'sín) *n.* [Gk. *kytos*, hollow; *toxikon*, poison.] A cell-poisoning substance formed in blood serum; cytolysin; enzymoid.
- cytotrophoblast** (sī'tōtrōf'ōblást) *n.* [Gk. *kytos*, hollow; *trophe*, nourishment; *blastos*, bud.] Inner layer of trophoblast, layer of Langhans.
- cytotropism** (sītōt'rōpizm) *n.* [Gk. *kytos*, hollow; *trope*, turning.] The mutual attraction of two or more cells.
- cytozoic** (sī'tōzō'ík) *a.* [Gk. *kytos*, hollow; *zoon*, animal.] Living within a cell; *appl.* sporozoan trophozoite.
- cytula** (sīt'ūlā) *n.* [Gk. *kytos*, hollow.] The fertilised ovum or parent cell.

## D

- dacryocyst** (dāk'riōsíst) *n.* [Gk. *dakryon*, tear; *kystis*, bladder.] Lacrimal sac; saccus lacrimalis.
- dakryon** (dāk'riōn) *n.* [Gk. *dakryon*, tear.] Point of junction of anterior border of lacrimal with frontal bone and frontal process of maxilla.

**dactyl** (dāk'tīl) *n.* [Gk. *daktylos*, finger.] A digit; finger, or toe; terminal ventral projection of prae-tarsus in scorpions; dactylus.

**dactylar** (dāk'tīlār) *a.* [Gk. *daktylos*, finger.] *Pert.* finger or digit.

**dactylognathite** (dāk'tilōnāth'it) *n.* [Gk. *daktylos*, finger; *gnathos*, jaw.] Terminal segment of a maxilliped.

**dactyloid** (dāk'tiloid) *a.* [Gk. *daktylos*, finger; *eidos*, form.] Like a finger.

**dactylopatagium** (dāk'tilōpātāji'um) *n.* [Gk. *daktylos*, finger; L. *patagium*, border.] Ectopatagium, *q.v.*

**dactylopodite** (dāk'tilōpōdīt) *n.* [Gk. *daktylos*, finger; *pous*, foot.] Distal joint in certain limbs of Crustacea; metatarsus and tarsus, of spiders.

**dactylopore** (dāk'tilōpōr') *n.* [Gk. *daktylos*, finger; *poros*, channel.] Opening in skeleton of Milleporina, for protrusion of a dactylozoooid.

**dactylopteroous** (dāk'tilōp'tērūs) *a.* [Gk. *daktylos*, finger; *pteron*, wing.] With anterior rays of pectoral fins more or less free.

**dactylozoooid** (dāk'tilōzō'oid) *n.* [Gk. *daktylos*, finger; *zoon*, animal; *eidos*, form.] A hydroid modified for catching prey, long, with tentacles or short knobs, with or without a mouth.

**dactylus** (dāk'tilūs) *n.* [Gk. *daktylos*, finger.] Part of tarsus of an insect; dactyl of scorpions.

**dart** (dārt) *n.* [O.F. *dart*, dagger.] Any structure resembling a dart; *appl.* a crystalline structure in molluscs.

**dart sac**,—a small sac, containing a limy dart, attached to vagina near its orifice in some gastropods.

**dartoid** (dār'toid) *a.* [Gk. *dartos*, flayed.] *Pert.* the dartos.

**dartos** (dār'tōs) *n.* [Gk. *dartos*, flayed.] Tunica dartos, a thin layer of non-striped muscle united to skin of scrotum.

**Darwinian tubercle**,—the slight prominence on helix, of external

ear, near the point where it bends downwards.

**Darwinism** (Dār'winizm) *n.* [C. *Darwin*]. The theory of origin of species by natural selection working on slight variations that occur, thereby selecting those best adapted to survive.

**dasypaedes** (dās'īpē'dēz) *n. plu.* [Gk. *dasys*, hairy; *païs*, child.] Birds whose young are downy at hatching.

**dasyphyllous** (dās'īfil'ūs) *a.* [Gk. *dasys*, hairy; *phyllon*, leaf.] With thickly haired leaves.

**dauermodification** (dow'ērmōdīfī-kā'shūn) *n.* [Ger. *Dauer*, duration; L. *modificatio*, modification.] A change induced by environmental factors and persisting for several generations but not permanently, the organism eventually reverting to type.

**daughter** (dō'tēr) *n.* [A.S. *dohtor*, daughter.] Offspring of first generation with no reference to sex, as daughter-cell, daughter-nucleus, etc.; daughter-chromosome: a chromatid during anaphase.

**day-neutral**,—*appl.* plants in which flowering can be induced by either a long or a short photoperiod. *Cf.* long-day, short-day.

**dealation** (dēālā'shūn) *n.* [L. *de*, away; *alatus*, winged.] The removal of wings, as by female ants after fertilisation.

**deamination** (dēām'īnāshūn) *n.* [L. *de*, down; Gk. *ammoniacum*, resinous gum.] The conversion of ammonium salts into urea, partly accomplished in the liver.

**death** (dēth) *n.* [A.S. *deāth*, death.] Complete and permanent cessation of vital functions in an organism.

**death-point**,—temperature above or below which organisms cannot exist.

**Débove's membrane** [M. G. *Débove*, French histologist]. Layer between tunica propria and epithelium of tracheal, bronchial, and intestinal mucous membranes; subepithelial endothelium.

**decalcify** (dēkāl'sifi) *v.* [L. *de*, away; *calx*, lime; *facere*, to make.] To deprive of lime salts; to treat with acids for removal of calcareous part.

**decamerous** (dēkām'ērūs) *a.* [Gk. *deka*, ten; *meros*, part.] With the various parts arranged in tens.

**decandrous** (dēkān'drūs) *a.* [Gk. *deka*, ten; *aner*, male.] Having ten stamens.

**decaploid** (dēk'āploid) *a.* [Gk. *deka*, ten; *aploos*, onefold; *eidos*, form.] Having ten times the haploid number of chromosomes.

**decapod** (dēk'āpōd) *a.* [Gk. *deka*, ten; *pous*, foot.] Of Crustacea, with five pairs of legs on thorax; of Cephalopoda, with ten arms.

**decapodiform** (dēk'āpōd'ifōrm) *a.* [Gk. *deka*, ten; *pous*, foot; L. *forma*, shape.] Resembling a decapod, *appl.* insect larvae.

**decemfid** (dēsēm'fid) *a.* [L. *decem*, ten; *findere*, to cleave.] Cut into ten segments.

**decemfoliate** (dēs'ēmfol'iāt) *a.* [L. *decem*, ten; *folium*, leaf.] Ten-leaved.

**decemjugate** (dēsēm'joogāt) *a.* [L. *decem*, ten; *jugare*, to join.] With ten pairs of leaflets.

**decempartite** (dēs'ēmpār'tit) *a.* [L. *decem*, ten; *partiri*, to divide.] Ten-lobed; divided into ten lobes.

**decidua** (dēsīd'ūā) *n.* [L. *decidere*, to fall off.] The mucous membrane lining the pregnant uterus, cast off after parturition.

**decidual** (dēsīd'ūāl) *a.* [L. *decidere*, to fall off.] *Pert.* decidua.

**deciduate** (dēsīd'ūāt) *a.* [L. *decidere*, to fall off.] Characterised by having a decidua; partly formed by the decidua.

**deciduous** (dēsīd'ūūs) *a.* [L. *decidere*, to fall down.] Falling at end of growth period or at maturity.

**declinate** (dēk'lināt) *a.* [L. *de*, away; *clinare*, to bend.] Bending aside in a curve, as anther filament in horse-chestnut.

**decollated** (dēkōl'ātēd) *a.* [L. *de*, away from; *collum*, neck.] With apex of spire wanting.

**decomposed** (dē'kōmpōzd') *a.* [L. *de*, away; *cum*, with; *pausare*, to rest.] Not in contact; not adhering, said of barbs of feather when separate; decayed.

**decompound** (dē'kōmpōund') *a.* [L. *de*, away; *cum*, with; *ponere*, to place.] With monopodial branching very complete, and ultimate wings little developed; *appl.* leaf.

**deconjugation** (dē'kōnjoogā'shūn) *n.* [L. *de*, away from; *conjugare*, to join together.] Separation of paired chromosomes, as before end of meiotic prophase.

**decorticate** (dēkōr'tikāt) *v.* [L. *decorticare*, to peel.] To remove bark or cortex. *a.* With cortex ablated.

**decumbent** (dēkūm'bēnt) *a.* [L. *decumbere*, to lie down.] *Appl.* stems which trail on ground, but rise at apex.

**decurrent** (dēkūr'ēnt) *a.* [L. *de*, away; *currere*, to run.] Having leaf base prolonged down stem as a winged expansion or rib; prolonged down stipe, as gills of agaric.

**decussate** (dēkūs'āt) *a.* [L. *decussare*, to cross.] Crossed; having paired leaves, succeeding pairs crossing at right angles.

**decussation** (dēk'ūsā'shūn) *n.* [L. *decussare*, to cross.] Decussate condition of leaves; crossing of nerves with interchange of fibres, as in optic and pyramidal tracts.

**dedifferentiation** (dēdīf'ērēnshīā'shūn) *n.* [L. *de*, away from; *differentia*, difference.] The losing of characteristics of specialised cells and regression to a more simple state.

**dédoublement** (dā'dooblēmōng') *n.* [F. *dédoublement*, dividing into two.] Chorisism; deduplication.

**deduplication** (dēdū'plikā'shūn) *n.* [L. *de*, by reason of; *duplicare*, to double.] Chorisism, *q.v.*

**defaecation** (dē'fēkā'shūn) *n.* [L. *defaecatio*, voiding of excrement.] The expulsion of faeces.

**defensive** (dēfēn'siv) *a.* [L. *defendere*, to defend.] Protective; *appl.* proteid substances which destroy toxic substances of bacteria; *appl.* numerous organs or parts of organs in various animals or plants.

**deferent** (dēf'erēnt) *a.* [L. *deferre*, to carry away.] Conveying away; *appl.* ducts, vasa deferentia, *q.v.*

**deferred** (dēfērd') *a.* [L. *deferre*, to carry off.] *Appl.* shoots arising from dormant buds.

**deficiency**,—inactivation or absence of a chromosomal segment or gene.

**deficiency diseases**,—pathological conditions in plants and animals, due to lack of certain necessary nutritive substances; *e.g.* crown rot in sugar beet due to boron deficiency; diseases in mammals due to vitamin deficiency, absence of vitamin A causing poor growth and xerophthalmia,—of B<sub>1</sub>, beri-beri,—of B<sub>2</sub>, retardation of growth,—of C, scurvy,—of D, rickets,—of E, infertility and paralysis,—of K, bleeding,—etc.

**definite** (dēf'init) *a.* [L. *definire*, to limit.] Fixed, constant; cymose, *appl.* inflorescences with primary axis terminating early in a flower; *appl.* stamens limited to twenty in number.

**definitive** (dēf'itiv) *a.* [L. *definire*, to limit.] Defining or limiting; complete, fully developed; final, *appl.* host of adult parasite.

**defoliate** (dēfō'liāt) *a.* [L. *defoliare*, to strip of leaves.] Bared at the annual fall. *v.* To deprive of leaves.

**degeneration** (dējēnērā'shūn) *n.* [L. *degenerare*, to degenerate.] Change to a less specialised or functionally less active form; retrogressive evolution.

**deglutition** (dēglōotish'ūn) *n.* [L. *de*, down; *glutire*, to swallow.] The process of swallowing.

**dehiscence** (dēhīs'ēns) *n.* [L. *de-*

*hiscere*, to gape.] The spontaneous opening of an organ or structure along certain lines or in a definite direction.

**deinopore** (dī'nōpōr) *n.* [Gk. *deinos*, urn; *poros*, channel.] A cell bridge.

**deirids** (dī'rīdz) *n. plu.* [Gk. *deiras*, chain of hills.] Cervical papillae in Nematoda.

**Deiters' cells** [O. F. C. *Deiters*, German anatomist]. Supporting cells between rows of outer hair-cells in organ of Corti; outer phalangeal cells.

**delamination** (dēlām'īnā'shūn) *n.* [L. *de*, down; *lamina*, layer.] The dividing off of cells to form new layers.

**deletion** (dēlē'shūn) *n.* [L. *delere*, to efface.] A deficiency of an acentric part of chromosome; absence of a chromosome segment and of the genes involved.

**deliquescent** (dēl'ikwēs'ēnt) *a.* [L. *deliquescere*, to become fluid.] Having lateral buds the more vigorously developed, so that the main stem seems to divide into a number of irregular branches; becoming fluid.

**delitescence** (dēlītēs'ēns) *n.* [L. *delitescere*, to lie hidden.] The latent period of a poison; incubation period of a pathogenic organism.

**delomorphie** (dēl'ōmōr'fik) *a.* [Gk. *delos*, visible; *morphe*, shape.] With definite form, *appl.* oxyntic cells of the gastric glands; delomorphous.

**delthyrium** (dēlthī'rīūm) *n.* [Gk. *delos*, visible; *thyron*, little door.] The opening, between hinge and beak, for peduncle exit in many Brachiopoda.

**deltidium** (dēltid'itūm) *n.* [Gk.  $\Delta$ , delta; *idion*, *dim.*] A plate covering the delthyrium.

**deltoid** (dēl'toid) *a.* [Gk.  $\Delta$ , delta; *eidos*, form.] More or less triangular in shape, *appl.* muscle, etc.; *appl.* oral plates on calyx of Blastoidea.



**demaniān** (dēmān'īān) *a.* [*J. G. de Man*, French zoologist]. *Appl.* a complex system of paired efferent tubes connecting with intestine and uteri in Nematoda, and associated with gelatinous secretion for protection of eggs.

**deme** (dēm) *n.* [Gk. *demos*, people.] Assemblage of taxonomically closely related individuals; aggregate of single cells.

**demersal** (dēmēr'sāl) *a.* [*L. demergere*, to plunge into.] Living on or near bottom of sea or lake; sunk.

**demersed** (dēmēr'sd) *a.* [*L. demergere*, to plunge into.] Growing under water; *appl.* parts of plants.

**demibranch**,—hemibranch, *q.v.*

**demifacet** (dēmifās'ēt) *n.* [*L. dimidius*, half; *facies*, face.] Part of parapophysis facet when divided between centra of two adjacent vertebrae.

**demilunes**,—crescentic cells; crescentic bodies of cells of some salivary gland alveoli, crescents of Gianuzzi or demilunes of Heidenhain.

**demiplate** (dēm'iplāt) *n.* [*L. dimidius*, half; *platus*, flat.] Plate cut off by fusion of adjoining plates behind it from central suture line of ambulacral area in echinoderms.

**demisheath** (dēm'ishēth) *n.* [*L. dimidius*, half; A.S. *sceath*, sheath.] One of paired protecting covers of insect ovipositor.

**demoid** (dē'moid) *a.* [Gk. *demos*, the commons.] Abundant.

**denatant** (dēnā'tānt) *a.* [*L. de*, down from; *natare*, to swim.] Swimming, drifting, or migrating with the current, *opp.* contranatant.

**dendriform** (dēn'drīfōrm) *a.* [Gk. *dendron*, tree; *L. forma*, shape.] Dendroid; tree-like.

**dendrite** (dēn'drit) *n.* [Gk. *dendron*, tree.] A fine branch of a dendron; a dendron.

**dendritic** (dēndrīt'ik) *a.* [Gk. *dendron*, tree.] Dendroid; *appl.* tree-like structures or markings; like, *pert.*, or having, dendrites or dendrons.

**dendrochronology** (dēn'drōkrōnōl'

ōji) *n.* [Gk. *dendron*, tree; *chronos*, time; *logos*, discourse.] Determination of age of trees or timber; dating by comparative study of tree rings; science of tree-ring analysis and its implications.

**Dendrogaea** (dēn'drojē'ā) *n.* [Gk. *dendron*, tree; *gaia*, earth.] A zoogeographical region including all the neotropical region except temperate South America.

**dendroid** (dēn'droid) *a.* [Gk. *dendron*, tree; *eidōs*, form.] Tree-like; much branched.

**dendrology** (dēndrōl'ōji) *n.* [Gk. *dendron*, tree; *logos*, discourse.] The study of trees.

**dendron** (dēn'drōn) *n.* [Gk. *dendron*, tree.] A protoplasmic process of the nerve cell, which conducts impulses towards the cell body.

**denitrification** (dē'nitrifikā'shūn) *n.* [*L. de*, away; Gk. *nitron*, soda; *L. facere*, to make.] Reduction of nitrates, to nitrites and ammonia, as in plant tissues, or to molecular nitrogen, as by certain soil bacteria.

**dens** (dēnz) *n.* [*L. dens*, tooth.] Tooth, or tooth-like process; odontoid process of axis or epistropheus.

**dens serotinus**, - the third molar or wisdom-tooth.

**dental** (dēn'tāl) *a.* [*L. dens*, tooth.] *Pert.* teeth; *appl.* nerves, blood-vessels, canals, furrows, papillae, sac, tissue, etc.

**dentary** (dēn'tārī) *a.* [*L. dens*, tooth.] *Pert.* dentaries, membrane bones in lower jaw of many vertebrates. *n.* Dentary bone or os dentale.

**dentate** (dēn'tāt) *a.* [*L. dens*, tooth.] Toothed; with sharp saw-like teeth on the margin.

**dentate ciliate**,—with teeth and hairs on the margins; *appl.* leaves.

**dentate crenate**,—with marginal teeth somewhat rounded.

**denticles** (dēn'tiklz) *n. plu.* [*L. denticulus*, little tooth.] Small tooth-like processes; the paragnaths of certain Polychaeta; the teeth within the secondary orifice in Polyzoa; the scales of certain Elasmobranchii.

**denticulate** (dēntik'ulāt) *a.* [L. *denticulus*, little tooth.] Having denticles; with minute marginal teeth.

**dentin**,—*dentine*, *q.v.*

**dentinal** (dēn'tināl) *a.* [L. *dens*, tooth.] *Pert.* dentine; *appl.* tubules, *i.e.* canaliculi dentales.

**dentine** (dēn'tin) *n.* [L. *dens*, tooth.] A hard, elastic substance, chemically resembling bone, composing the greater part of teeth and denticles; dentin.

**dentition** (dēntish'ūn) *n.* [L. *dens*, tooth.] The number, arrangement, and kind of teeth; teething.

**deperulation** (dē'pērulā'shūn) *n.* [L. *de*, away; *dim.* of *pera*, wallet.] The pushing apart or throwing off, of bud scales.

**depigmentation** (dēpīg'mēntā'shūn) *n.* [L. *de*, away; *pingere*, to paint.] The destruction of colour in a cell, by natural or experimental physiological processes.

**depilation** (dēp'ilā'shūn) *n.* [L. *de*, away; *pilus*, hair.] Loss of hairy covering, as of plants when maturing; removal of hair.

**deplanate** (dēp'lānāt) *a.* [L. *deplanare*, to level.] Levelled, flattened.

**depressant** (dēprēs'ānt) *n.* [L. *deprimere*, to keep down.] Anything that lowers vital activity.

**depressomotor** (dēprēs'ōmō'tōr) *n.* [L. *deprimere*, to keep down; *movere*, to move.] Any nerve which lowers muscular activity.

**depressor** (dēprēs'ōr) *n.* [L. *deprimere*, to keep down.] Any muscle which lowers or depresses any structure; *appl.* a nerve which lowers the activity of an organ.

**depula** (dēp'ulā) *n.* [Gk. *depas*, goblet.] Invaginated blastula preceding gastrula stage in development of embryo.

**deric** (dēr'ik) *a.* [Gk. *deros*, skin.] Dermal; *appl.* epithelium, synonym of epidermis.

**derm** (dērm), **derma** (dēr'mā) *n.* [Gk. *derma*, skin.] The layers of integument below the epidermis; dermis.

**dermal** (dēr'māl) *a.* [Gk. *derma*, skin.] *Pert.* derma, or skin.

**dermalia** (dērmā'liā) *n. plu.* [Gk. *derma*, skin.] Microscleres in the dermal membrane of sponges.

**dermarticulare** (dēr'mārtik'ulā'rē) *n.* [Gk. *derma*, skin; L. *artculus*, joint.] The goniale, *q.v.*

**dermatogen** (dēr'mātōjēn) *n.* [Gk. *derma*, skin; *genos*, birth.] The young or embryonic epidermis in plants; antigen of skin disease.

**dermatoglyphics** (dēr'mātōglif'iks) *n.* [Gk. *derma*, skin; *glyphein*, to carve.] Skin, palm, finger, sole, toe prints; print formulae.

**dermatomes** (dēr'mātōmz) *n. plu.* [Gk. *derma*, skin; *tome*, cutting.] Lateral parts of segmental mesoderm, which develop into connective tissue of corium or dermis; dermatomere.

**dermatophyte** (dēr'mātōfīt) *n.* [Gk. *derma*, skin; *phyton*, plant.] Any fungous parasite of skin; dermatophyton, dermatophyte, epidermophyte.

**dermatoplasm** (dēr'mātōplāzm) *n.* [Gk. *derma*, skin; *plasma*, mould.] Cell-wall protoplasm.

**dermatoplast** (dēr'mātōplāst') *n.* [Gk. *derma*, skin; *plastos*, moulded.] A protoplast with a cell wall.

**dermatopsy** (dēr'mātōp'si') *n.* [Gk. *derma*, skin; *opsis*, sight.] Condition of seeing with the skin, *i.e.* with a skin sensitive to light.

**dermatoskeleton**,—*exoskeleton*.

**dermatosome** (dēr'mātōsōm') *n.* [Gk. *derma*, skin; *soma*, body.] One of vital units forming a cell-membrane.

**dermatozoon** (dēr'mātōzō'ōn) *n.* [Gk. *derma*, skin; *zoon*, animal.] Any animal parasite of the skin; ectozoon.

**dermentoglossum** (dērm'ēntōglōs'ūm) *n.* [Gk. *derma*, skin; *entos*, within; *glossa*, tongue.] A bone arising by fusion of dentinal bases, covering entoglossum, in some fishes.

**dermethmoid** (dērmēth'moid) *n.* [Gk. *derma*, skin; *ethmos*, sieve; *eidōs*, form.] Supra-ethmoid, *q.v.*

**dermic** (dēr'mik) *a.* [Gk. *derma*, skin.] *Pert.*, or derived from, skin.

**dermis** (dēr'mis) *n.* [Gk. *derma*, skin.] Derm, *q.v.*; corium.

**dermoblast** (dēr'möbläst') *n.* [Gk. *derma*, skin; *blastos*, bud.] The layer of mesoblast which gives rise to the derma.

**dermoccipitals** (dērm'öksip'itälz) *n. plu.* [Gk. *derma*, skin; *L. occiput*, back of head.] Two bones taking the place of interparietal in some lower forms and in development of higher.

**dermo-ossification** (dēr'möös'ifikä'shün) *n.* [Gk. *derma*, skin; *L. os*, bone; *fieri*, to become.] A bone formed in the skin.

**dermopharyngeal** (dēr'möfärin'jēäl) *n.* [Gk. *derma*, skin; *pharyngx*, gullet.] Superior or inferior plate of membrane bone supporting pharyngeal teeth in some fishes.

**dermophyte**,—dermatophyte, *q.v.*

**dermosclerites** (dēr'mösklēr'its) *n. plu.* [Gk. *derma*, skin; *skleros*, hard.] Masses of spicules found in tissues of Alcyonidae.

**dermoskeleton** (dēr'möskēl'etön) *n.* [Gk. *derma*, skin; *skeletos*, dried.] Exoskeleton, *q.v.*

**dermotrichia** (dēr'mötrik'iä) *n. plu.* [Gk. *derma*, skin; *thrix*, hair.] Dermal fin-rays.

**dermozoon**,—dermatozoon, *q.v.*

**derotreme** (dēr'ötrēm) *n.* [Gk. *deros*, skin; *trema*, aperture.] Skin forming an operculum, as in Megalobatrachus.

**dertrotheca** (dēr'tröthē'ka) *n.* [Gk. *dertron*, beak; *theke*, cup.] The horny casing of bird maxilla.

**dertrum** (dēr'trüm) *n.* [Gk. *dertron*, beak.] Any modification of the casing of maxilla in birds.

**Descemet's membrane** [*J. Descemet*, French anatomist]. The posterior elastic lamina of cornea; Demour's membrane.

**descending** (dēsēn'ding) *a.* [*L. de*, down; *scandere*, to climb.] Directed downwards, or towards caudal region; *appl.* blood-vessels, nerves, etc.

**desegmentation** (dēsēg'mēntä'shün) *n.* [*L. de*, from; *segmentum*, piece

cut off.] Fusion of segments originally separate.

**deserticolous** (dēz'értik'ölüs) *a.* [*L. desertus*, waste; *colere*, to inhabit.] Desert-inhabiting.

**desma** (dēs'mä, dēz-) *n.* [Gk. *desma*, bond.] Megascclere which forms characteristic skeletal network of Lithistida.

**desmactinic** (dēs'mäktin'ik,) *a.* [Gk. *desma*, bond; *aktis*, ray.] With podia continued upwards to apical plate, *appl.* Stelleroidea; *cf.* lysactinic.

**desmergate** (dēs'mērgät) *n.* [Gk. *desma*, bond; *ergates*, worker.] A type of ant intermediate between worker and soldier.

**desmocyte** (dēs'mösit) *n.* [Gk. *desmos*, bond; *kytos*, hollow.] A connective tissue cell; fibroblast.

**desmogen** (dēs'möjēn,) *n.* [Gk. *desmos*, bond; *genos*, descent.] Merismatic or growing tissue.

**desmognathous** (dēs'mög'näthüs) *a.* [Gk. *desmos*, bond; *gnathos*, jaw.] Having maxillopalatines fused in middle line owing to other peculiarities in skull; *appl.* certain birds.

**desmology** (dēs'möl'öji) *n.* [Gk. *desmos*, bond; *logos*, discourse.] The anatomy of ligaments; *cf.* syndesmology.

**desmones** (dēs'mönz) *n. plu.* [Gk. *desmos*, bond.] Chemical substances exchanged by way of protoplasmic bridges between cells; amboceptors, *q.v.*

**desmose** (dēs'mös) *n.* [Gk. *desmos*, bond.] A strand connecting blepharoplasts at mitosis.

**desmosome** (dēs'mösöm) *n.* [Gk. *desmos*, bond; *soma*, body.] A thickening of intercellular connections in epithelium; bridge corpuscle.

**desquamation** (dēs'kwämä'shün) *n.* [*L. de*, away; *squama*, scale.] Shedding of cuticle or epidermis in flakes.

**determinant** (dētēr'minänt) *n.* [*L. determinare*, to limit.] A hypothetical unit, being an aggregation of biophores determining the

development of a cell or of an independently variable group of cells; hereditary factor.

**determinate** (dētēr'mīnāt) *a.* [L. *determinare*, to limit.] With certain limits; *appl.* inflorescence with primary axis terminated early with a flower-bud; *appl.* cleavage.

**determination** (dētēr'mīnā'shūn) *n.* [L. *determinatio*, boundary.] The process adjusting regional development according to relative location of region and organisation centre.

**detorsion** (dētōr'shūn) *n.* [L. *de*, away; *torquere*, to twist.] Torsion in an opposite direction to that of original, resulting in a more or less posterior position of anus and circumanal complex.

**detoxication** (dē'tōksikā'shūn) *n.* [L. *de*, away; Gk. *toxikon*, poison.] The inhibition of effects of toxins in the body, either by a protective synthesis of comparatively harmless substances, or by means of antibodies.

**detrusor** (dētroo'sōr) *n.* [L. *detruere*, to thrust from.] The outer of three layers of the muscular coat of the urinary bladder; physiologically, all three layers; detrusor urinae.

**deuter cell**,—eurycyst, *q.v.*

**deutero**,—also see deuto-

**deutocerebrum** (dū'tērōsēr'ēbrūm) *n.* [Gk. *deuteros*, second; L. *cerebrum*, brain.] That portion of crustacean brain from which antennular nerves arise. *Cf.* deutocerebrum.

**deuterocele** (dū'tērōsēl) *n.* [Gk. *deuteros*, second; *koiolos*, hollow.] The coelom.

**deuterocone** (dū'tērōkōn') *n.* [Gk. *deuteros*, second; *konos*, cone.] Mammalian premolar cusp corresponding to molar protocone.

**deutero genesis** (dū'tērōjēn'ēsīs) *n.* [Gk. *deuteros*, second; *genesis*, origin.] Second phase of embryonic development, involving growth in length and consequent bilateral symmetry; *cf.* protogenesis.

**deuteroplasm**,—deutoplasm, *q.v.*

**deuteropolydesmic** (dū'tērōpōlidēs'mik) *a.* [Gk. *deuteros*, second; *desmos*, bond.] *Appl.* cyclomerial scales composed mainly of synpolydesmic scales.

**deuteroproteose** (dū'tērōprō'tēōs) *n.* [Gk. *deuteros*, second; *protos*, first.] A secondary product from digestion of proteids.

**deuterostoma** (dū'tērōs'tōmā) *n.* [Gk. *deuteros*, second; *stoma*, mouth.] A mouth formed secondarily, as distinct from gastrula mouth.

**deuterotoky** (dū'tērōt'ōkī) *n.* [Gk. *deuteros*, second; *tokos*, birth.] Reproduction of both sexes from parthenogenetic eggs; *cf.* arrhenotoky and thelyotoky.

**Deuterozoic** (dū'tērōzō'īk) *a.* [Gk. *deuteros*, second; *zoe*, life.] *Appl.* and *pert.* the newer Palaeozoic faunal epoch, the age of fishes, also of pteridosperms.

**deuterozoid** (dū'tērōzō'id) *n.* [Gk. *deuteros*, second; *zoon*, animal; *eidos*, form.] A zooid produced by budding from a primary zooid.

**deuthyalosome** (dūthī'ālōsōm) *n.* [Gk. *deuteros*, second; *hyalos*, glass; *soma*, body.] The nucleus remaining in ovum after formation of first polar body.

**deuto**,—also see deuto-

**deutoblasts** (dū'tōblāsts) *n. plu.* [Gk. *deuteros*, second; *blastos*, bud.] The amoeba-like bodies formed from protoblasts in zygote of Microclossia, and liberated to multiply in the blood.

**deutobroch** (dū'tōbrōk) *a.* [Gk. *deuteros*, second; *brochos*, mesh.] *Appl.* nuclei of gonidia preparing for leptotene stage; *cf.* protobroch.

**deutocerebrum** (dū'tōsēr'ēbrūm) *n.* [Gk. *deuteros*, second; L. *cerebrum*, brain.] Portion of insect brain derived from fused ganglia of antennary segment of head; deutocerebron. *Cf.* deuterocelebrum.

**deutomalae** (dū'tōmā'lē) *n. plu.*

[Gk. *deuteros*, second; *malon*, cheek.] The broad plate in Chaetognatha, formed by fusion of second pair of mouth appendages.

**deutomerite** (dū'tōm'ērīt) *n.* [Gk.

*deuteros*, second; *meros*, part.] The posterior division of certain gregarines; *cf.* *primita*.

**deutonephros** (dū'tōnē'rōs) *n.* [Gk.

*deuteros*, second; *nephros*, kidney.] Mesonephros.

**deutoplasm** (dū'tōplāzm) *n.* [Gk.

*deuteros*, second; *plasma*, mould.] Yolk or food material in cytoplasm of ovum or other cell.

**deutoscolex** (dū'tōskō'lēks) *n.* [Gk.

*deuteros*, second; *skolex*, worm.] A secondary scolex produced by budding, in bladderworm stage of certain tape-worms.

**deutosomes** (dū'tōsōmz) *n. plu.* [Gk.

*deuteros*, second; *soma*, body.] Granules of nucleolus cast out into cytoplasm, from which yolk is said to arise.

**deutovum** (dū'tō'vūm) *n.* [Gk.

*deuteros*, second; *L. ovum*, egg.] A stage in the metamorphosis of certain mites.

**development** (dēvēl'ōpmēnt) *n.* [F.

*développer*, to unfold.] The changes undergone by an organism from its beginning to maturity.

**deviation** (dēvēā'shūn) *n.* [*L. de*,

away from; *via*, way.] Divergence from corresponding developmental stages.

**Devonian** (dēvō'nīān) *a.* [*Devon*,

where strata were first studied.] *Pert.* or *appl.* Palaeozoic geological period preceding Carboniferous.

**dexiotropic** (dēk'siōtrōp'ik) *a.* [Gk.

*dexios*, right; *trope*, turn.] Turning from left to right, as whorls; *appl.* shells; *appl.* spiral cleavage of cells; *appl.* movement of Volvox.

**dextral** (dēk'strāl) *a.* [*L. dexter*,

right-hand.] Dextrotropic, *q.v.*

**dextrin** (dēk'strīn) *n.* [*L. dexter*,

right-hand.] A soluble substance derived from starch by exposure to high temperature for a short time.

**dextrose** (dēkstrōs') *a.* [*L. dexter*,

right; *vertere*, to turn.] Growing in a spiral which twines from left to right; clockwise. *Opp.* *sinistorse*.

**dextrose** (dēk'strōs) *n.* [*L. dexter*,

right.] Grape sugar or glucose, the end product of starch digestion,  $C_6H_{12}O_6$ .

**diabetogenic** (diābē'tōjēn'ik) *a.* [Gk.

*diabainein*, to cross over; *gignesthai*, to beget.] Causing diabetes;

*appl.* a prepituitary hormone antagonistic to insulin, affecting carbohydrate metabolism; *appl.* a hormone of sinus gland of eye stalk in crustaceans.

**diachaenium** (di'ākē'nīūm) *n.* [Gk.

*dis*, twice; *a*, not; *chainein*, to gape.] Each part of a cremocarp.

**diachronous** (diāk'rōnūs) *a.* [Gk.

*dia*, asunder; *chronos*, time.] Dating from different periods; *appl.* fossils occurring in the same geological formation, though in different areas, due, *e.g.*, to changes in sea-level.

**diachyma** (diāk'īmā) *n.* [Gk. *dia*,

throughout; *chymos*, juice.] Leaf parenchyma.

**diacoel** (di'āsēl) *n.* [Gk. *dia*,

through; *koilos*, hollow.] Third ventricle of brain.

**diacranteric** (di'āk'rāntēr'ik) *a.* [Gk.

*dia*, asunder; *kranteres*, wisdom teeth.] With diastema between front and back teeth, as in snakes.

**diactinal** (diāk'tīnāl) *a.* [Gk. *dis*,

twice; *aktis*, ray.] With two rays pointed at ends.

**diadelphous** (di'ādēl'fūs) *a.* [Gk.

*dis*, twice; *adelphos*, brother.] Having stamens in two bundles owing to fusion of filaments.

**diadematoide** (di'ādēm'atoid) *a.* [Gk.

*diadema*, crown; *eidos*, shape.] Of Echinoidea, having three primary pore plates with occasionally a secondary between aboral and middle primary; as *opp.* *arbacioide*, one primary, with secondary on each side, and triplechinoid, two primaries, with one or more secondaries between.

**diadromous** (dīād'rōmūs) *a.* [Gk. *diadromos*, wandering.] Having nerves or veins radiating in fan-like manner; *appl.* leaves.

**diaene** (dī'ēn) *n.* [Gk. *dis*, twice; an analogy of triaene, from Gk. *triaina*, trident.] A form of triaene, with one of the cladi reduced or absent.

**diageotropism** (dī'ājēōt'rōpīzm) *n.* [Gk. *dia*, through; *ge*, earth; *trope*, turn.] Tendency in certain parts of plants to assume position at right angles to direction of gravity.

**diagnosis** (dī'āgnō'sīs) *n.* [Gk. *diagnosis*, discrimination.] A concise description of an organism with full distinctive characters; discrimination of a physiological or pathological condition by its distinctive signs.

**diagnostic** (dī'āgnōs'tik) *a.* [Gk. *diagnosis*, discrimination.] Distinguishing; differentiating the species or genus, etc., from others similar.

**diaheliotropism** (dī'āhēlōt'rōpīzm) *n.* [Gk. *dia*, through; *helios*, sun; *trope*, turn.] Diaphototropism.

**diakinesis** (dī'ākīnē'sīs) *n.* [Gk. *dia*, through; *kinesis*, movement.] The later prophase stage of meiosis, between diplotene and prometaphase; movement of chromosomes between metaphase and telophase.

**dialyneury** (dī'ālīnū'rī) *n.* [Gk. *dialyein*, to reconcile; *neuron*, nerve.] In certain gastropods, condition of having pleural ganglia united to opposite visceral nerve by anastomosis with pallial nerve.

**dialypetalous** (dī'ālīpēt'ālūs) *a.* [Gk. *dia*, asunder; *lyein*, to loose; *petalon*, petal.] Polypetalous.

**dialyphyllous** (dī'ālīfīl'ūs) *a.* [Gk. *dia*, asunder; *lyein*, to loose; *phyllon*, leaf.] With separate leaves.

**dialysepalous** (dī'ālīsēp'ālūs) *a.* [Gk. *dia*, asunder; *lyein*, to loose; *F. sépale*, sepal.] Polysepalous.

**dialysis** (dīāl'īsis) *n.* [Gk. *dia*, asunder; *lysis*, loosing.] Separation of dissolved crystalloids and colloids through semipermeable

membrane, crystalloids passing more readily; permeation.

**dialystely** (dī'ālistē'li) *n.* [Gk. *dia*, asunder; *lyein*, to loose; *stèle*, post.] A condition in which the steles in the stem remain more or less separate.

**diancistron** (dī'ānsīs'tron) *n.* [Gk. *dis*, twice; *angcistron*, hook.] A spicule resembling a stout sigma, but the inner margin of both hook and shaft thins out to a knife edge and is notched. *Plu.* diancistra.

**diandrous** (dīān'drūs) *a.* [Gk. *dis*, twice; *aner*, man.] Having two free stamens.

**diapause** (dī'āpōz) *n.* [Gk. *diapaucin*, to make to cease.] A spontaneous state of dormancy during development, as of insects; resting stage between anatrepsis and katrepsis in blastokinesis; sexual rest period, *appl.* annelids; *cf.* quiescence.

**diapedesis** (dī'āpēdē'sīs) *n.* [Gk. *diapedesis*, leaping through.] Emigration of white blood corpuscles through walls of capillaries into surrounding tissue; migration of cells to exterior, in certain larval sponges.

**diaphototropism** (dī'āfōtōt'rōpīzm) *n.* [Gk. *dia*, through; *phos*, light; *trope*, turn.] Tendency of plant organs to assume a position at right angles to rays of light; diaheliotropism.

**diaphragm** (dī'āfrām), **diaphragma** (dī'āfrāg'mā) *n.* [Gk. *diaphragma*, midriff.] The wall which separates the small cell, the prothallus, from rest of macrospore in Hydropterideae; a septum at nodes in Equisetum; a sheet of muscular tissue attached to introvert in worms; single strongly developed septum in Terebelliformia; perforated tissue that subdivides tentacle cavity in Polyzoa; a fibro-muscular abdominal septum enclosing perineural sinus in certain insects; the transverse septum separating cephalothorax from abdomen in certain Arachnida; a

- special fan-shaped muscle spreading from anterior end of ilia to oesophagus and base of lungs in Anura; a partition partly muscular, partly tendinous, separating cavity of chest from abdominal cavity in mammals; fold of dura mater on sella turcica.
- diaphysis** (diáf'ísis) *n.* [Gk. *dia*, through; *phyein*, to bring forth.] Shaft of limb bone, *opp.* epiphysis; abnormal growth of an axis or shoot.
- diapophysis** (di'ápōf'ísis) *n.* [Gk. *dia*, through; *apo*, from; *phyein*, to produce.] Lateral or transverse process of neural arch.
- diapsid** (diáp'sid) *a.* [Gk. *dis*, twice; *apsis*, arch.] *Appl.* skulls with supra- and infra-temporal fossae distinct; *cf.* synapsid.
- diarch** (di'ark) *a.* [Gk. *dis*, twice; *arche*, origin.] With two xylem and two phloem bundles; *appl.* root in which protoxylem bundles meet and form a plate of tissue across cylinder with phloem bundle on each side; *appl.* a bipolar type of spindle.
- diarthric** (diār'thrik) *a.* [Gk. *dis*, twice; *arthron*, joint.] *Pert.* two joints; diarticular.
- diarthrosis** (di'arthrō'sis) *n.* [Gk. *dis*, twice; *arthron*, joint.] An articulation allowing considerable movement.
- diaschistic** (di'askis'tik) *a.* [Gk. *dia*, through; *schistos*, split.] *Appl.* type of tetrads which divide once transversely and once longitudinally in meiosis; *cf.* anaschistic.
- diaspore** (di'áspōr) *n.* [Gk. *diaspora*, dispersion (*dia*, asunder; *spora*, seed.)] Any spore, seed, fruit, or other portion of a plant when being dispersed and able to produce a new plant; disseminule, propagule.
- diastase** (di'ástās) *n.* [Gk. *diastanai*, to separate.] An enzyme which acts principally in converting starch into sugar.
- diastasis** (diās'tāsís) *n.* [Gk. *dia*, through; *stasis*, halt.] Rest period preceding systole.
- diastatic** (di'ástāt'ík) *a.* [Gk. *dia*, through; *histanai*, to set.] *Pert.* diastase, or having similar properties; *pert.* diastasis.
- diastem** (di'ástēm), **diastema** (diās'tēmā) *n.* [Gk. *diastema*, space.] A toothless space usually between two types of teeth; an equatorial modification of protoplasm preceding cell division.
- diaster** (diās'tēr) *n.* [Gk. *dis*, twice; *aster*, star.] The stage in mitosis where daughter chromosomes are grouped near spindle poles ready to form a new nucleus.
- diastole** (diās'tōlē) *n.* [Gk. *diastole*, difference.] Rhythmical relaxation of heart; rhythmical expansion of a contractile vacuole. *Opp.* systole.
- diastomatic** (di'ástōmāt'ík) *a.* [Gk. *dia*, through; *stoma*, mouth.] Through stomata or pores; giving off gases from spongy parenchyma through stomata.
- diathesis** (diāth'ēsís) *n.* [Gk. *diathesis*, disposition.] A constitutional predisposition to a type of reaction, disease, or development.
- diatom** (di'ätōm) *n.* [Gk. *dia*, through; *temnein*, to cut.] A unicellular form of alga with walls impregnated with silica.
- diatomin** (diāt'ōmīn) *n.* [Gk. *diatemein*, to cut through.] A yellow pigment resembling fucoxanthin, in plastids of diatoms.
- diatropism** (diāt'rōpīzm) *n.* [Gk. *dia*, through; *trope*, turn.] The tendency of organs or organisms to place themselves at right angles to line of action of stimulus.
- diaxon** (diäk'sōn) *a.* [Gk. *dis*, twice; *axon*, axis.] With two axes, as certain sponge spicules.
- diaxone** (diäk'sōn) *n.* [Gk. *dis*, twice; *axon*, axis.] A nerve-cell with two axis-cylinder processes.
- diblastula** (diblās'tulā) *n.* [Gk. *dis*, twice; *blastos*, bud.] A coelenterate embryo consisting of two layers arranged round a central cavity.
- dibranchiate** (dibrāng'kiāt) *a.* [Gk. *dis*, twice; *branchia*, gills.] With two gills.

**dicaryon**, --dikaryon.

**dicellate** (di'selät) *a.* [Gk. *dikella*, two-pronged hoe.] With two prongs; *appl.* sponge spicules.

**dicentral** (disên'träl) *a.* [Gk. *dia*, through; *kentron*, centre.] *Appl.* canal in fish vertebral centrum.

**dicentric** (disên'trik) *a.* [Gk. *dis*, twice; *kentron*, centre.] Having two centromeres; *appl.* chromatids, chromosomes.

**dichasium** (dikä'züm) *n.* [Gk. *dichazein*, to divide in two.] A cymose inflorescence in which two lateral branches occur about same level.

**dichlamydeous** (di'klämīd'ëüs) *a.* [Gk. *dis*, twice; *chlamys*, cloak.] Having both calyx and corolla.

**dichogamy** (dikög'ämi) *n.* [Gk. *dicha*, in two; *gamos*, marriage.] Maturing of sexual elements at different times, ensuring cross-fertilisation; *cf.* protandry, protogyny.

**dichoptic** (diköp'tik) *a.* [Gk. *dicha*, in two; *opsis*, sight.] With eyes quite separate.

**dichotomous** (diköt'ömüs) *a.* [Gk. *dicha*, in two; *temnein*, to cut.] *Pert.*, characterised by dichotomy.

**dichotomy** (diköt'ömi) *n.* [Gk. *dicha*, in two; *temnein*, to cut.] Branching which results from division of growing point into two equal parts.

**dichroic** (dikrō'ik) *a.* [Gk. *dis*, twice; *chros*, colour.] Exhibiting dichroism, as chlorophyll solution; *cf.* dichromatic.

**dichroism** (di'krōīzm) *n.* [Gk. *dis*, twice; *chros*, colour.] Property of showing two colours, as one colour by transmitted and the other by reflected light.

**dichromatic** (di'krōmät'ik) *a.* [Gk. *di*-, two; *chroma*, colour.] With two colour varieties; seeing only two colours.

**dichromophil** (dikrōm'öfil) *a.* [Gk. *di*-, two; *chroma*, colour; *philein*, to love.] Staining with both acid and basic dyes.

**dichthadiigyne** (dikthäd'ijīnē) *n.*

[Gk. *dichthadios*, double; *gyne*, female.] A gynaeoid ant with voluminous ovaries, and without eyes and wings; a dichthadiiform female.

**diclinous** (di'klinūs, diklī'nūs) *a.* [Gk. *di*-, asunder; *kline*, bed.] With stamens and pistils on separate flowers; with staminate and pistillate flowers on same plant.

**diccoccus** (dikök'ūs) *a.* [Gk. *di*-, two; *kokkos*, kernel.] Having two one-seeded coherent capsules.

**dicostalia** (di'köstā'liä) *n.* [Gk. *di*-, two; *L. costa*, rib.] The secundibrachs or second brachial series in a crinoid.

**dicotyledon** (dikötīlē'dōn) *n.* [Gk. *di*-, two; *kotyledon*, cup-shaped hollow.] A plant with two seed-leaves.

**dictyodromous** (dik'tiöd'rōmūs) *a.* [Gk. *diktyon*, net; *dromein*, to run.] Net-veined, when the smaller veins branch and anastomose freely.

**dictyogen** (dik'tiōjēn) *n.* [Gk. *diktyon*, net; *-genes*, producing.] A net-leaved plant.

**dictyokinesis** (dik'tiökīnē'sis) *n.* [Gk. *diktyon*, net; *kinesis*, movement.] The breaking-up of the Golgi-apparatus at mitosis and segregation of dictyosomes to daughter-cells.

**dictyonalia** (dik'tiōnā'liä) *n.* [Gk. *diktyon*, net.] The principal parenchyma spicules of Dictyonina and of many Lyssacina.

**dictyosome** (dik'tiösōm) *n.* [Gk. *diktyon*, net; *soma*, body.] An element of the Golgi-apparatus, *q.v.*

**dictyospore** (dik'tiōspōr) *n.* [Gk. *diktyon*, net; *sporos*, seed.] A spore with transverse and longitudinal septa, of reticular appearance.

**dictyostele** (dik'tiöstē'lē) *n.* [Gk. *diktyon*, net; *stele*, post.] A network formed by meristemes.

**dictyotic** (dik'tiöt'ik) *a.* [Gk. *diktyon*, net.] *Appl.* moment of shell or skeleton formation, or lorication moment, as of siliceous skeleton of radiolarians; *appl.* stage in cell growth where chromosomes are lost to view in nuclear reticulum.



**dicyclic** (dis'k'lik) *a.* [Gk. *di-*, two; *kyklos*, circle.] Having a row of perradial infrabasals, *appl.* theca of Crinoidea; with two whorls; biennial, *appl.* herbs.

**didactyl** (didāk'til) *a.* [Gk. *di-*, two; *daktylos*, digit.] Having two fingers or two toes.

**didelphic** (didēl'fik) *a.* [Gk. *di-*, double; *delphys*, womb.] Having two uteri, as marsupials; amphidelphic.

**didymospore** (did'imōspōr) *n.* [Gk. *didymos*, twin; *sporos*, seed.] A two-celled spore.

**didymous** (did'imūs) *a.* [Gk. *didymos*, twin.] Growing in pairs.

**didynamous** (didīn'āmūs) *a.* [Gk. *di-*, two; *dynamis*, power.] With four stamens, two long, two short.

**diecious**,—dioecious, *q.v.*

**diencephalon**, (dī'ēnkēf'ālōn, -sēf'-) *n.* [Gk. *dia*, between; *engkephalos*, brain.] Part of the fore-brain, comprising thalamencephalon, pars mamillaris hypothalami, and posterior part of third ventricle; between-brain, 'tween-brain, inter-brain.

**diestrurn**,—dioestrus, *q.v.*

**differentiation** (dif'ērēn'shiā'shūn) *n.* [L. *differre*, to differ.] Modification in structure and function of the parts of an organism, owing to division of labour.

**diffuence** (dif'looēns) *n.* [L. *dis*, away; *fluere*, to flow.] Disintegration by vacuolisation.

**diffuse** (difūs') *a.* [L. *diffundere*, to pour.] Widely spread; not localised; with sharply defined at margin; *appl.* placenta with villi on all parts except poles.

**diffuse-porous**, — *appl.* wood in which vessels of approximately the same diameter tend to be evenly distributed in a growth ring; *cf.* ring-porous.

**digametic** (digāmēt'ik) *a.* [Gk. *dis*, twice; *gametes*, spouse.] Exhibiting digamety; having two types of gametes, one producing males, the other females; heterogametic.

**digastric** (digās'trik) *a.* [Gk. *di-*,

two; *gaster*, belly.] Two-bellied, *appl.* muscles fleshy at ends, tendinous in middle; biventral; *appl.* one of the suprahyoid muscles; *appl.* a branch of facial nerve.

**digenesis** (dijēn'ēsis) *n.* [Gk. *dis*, twice; *genesis*, descent.] Alternation of generations, *q.v.*

**digenetic** (dī'jēnēt'ik) *a.* [Gk. *dis*, twice; *genesis*, descent.] *Pert.* digenesis; requiring an alternation of hosts, *appl.* certain parasites.

**digenoporous** (dī'jēnōp'ōrūs) *a.* [Gk. *dis*, twice; *genos*, birth; *poros*, pore.] With two genital pores, *appl.* many Turbellaria.

**digestion** (dijēs'chūn) *n.* [L. *digestio*, digestion.] The process by which nutrient materials are rendered absorbable by action of various juices.

**digestive** (dijēs'tiv) *a.* [L. *digestio*, digestion.] *Pert.* digestion, or having power of aiding in digestion.

**digit** (dij'it) *n.* [L. *digitus*, finger.] Terminal division of limb in any vertebrate above fishes; toe or finger; distal part of chelae and chelicerae.

**digital** (dij'itāl) *a.* [L. *digitus*, finger.] *Pert.* finger or digit; also *appl.* structures resembling a digit. *n.* Distal joint of spider's pedipalp.

**digitaliform** (dij'itāl'ifōrm) *a.* [L. *digitus*, finger; *forma*, shape.] Finger-shaped, *appl.* corollae which are like the finger of a glove.

**digitate** (dij'itāt) *a.* [L. *digitus*, finger.] Having parts arranged like the fingers in a hand; with fingers.

**digitiform** (dij'itūfōrm) *a.* [L. *digitus*, finger; *forma*, shape.] Finger-shaped; *appl.* roots.

**digitigrade** (dij'itigrād') *a.* [L. *digitus*, finger; *gradus*, step.] Walking with only the digits touching the ground.

**digitinervate** (dij'itnēr'vāt) *a.* [L. *digitus*, finger; *nervus*, sinew.] Having veins radiating out from base like fingers of a hand, with usually five or seven veins; *appl.* leaves.

**digitipartite** (dij'itipâr'tit) *a.* [L. *digitus*, finger; *partire*, to divide.] Having leaves divided up in a hand-like pattern.

**digitipinnate** (dij'itipîn'ât) *a.* [L. *digitus*, finger; *pinnâ*, feather.] Having digitate leaves of which the leaflets are pinnate.

**digitule** (dij'itûl) *n.* [L. *digitulus*, little finger.] Any small finger-like process; small process on insect tarsi.

**digoneutic** (dî'gônû'tik) *a.* [Gk. *dis*, twice; *goneuein*, to produce.] Breeding twice a year.

**digonic** (digôn'ik) *a.* [Gk. *dis*, twice; *gone*, seed.] Producing male and female gametes in separate gones in the same individual; *cf.* amphigonic.

**digonoporous** (dî'gônöp'örûs) *a.* [Gk. *dis*, twice; *gone*, seed; *poros*, pore.] With two distinct genital apertures, male and female.

**digynous** (dij'inûs) *a.* [Gk. *di-*, two; *gyne*, woman.] Having two carpels.

**diheliotropism**, — diaheliotropism, *q.v.*

**diheterozygote** (dî'hëtërozî'gôt) *n.* [Gk. *dis*, twice; *heteros*, other; *zygotos*, yoked together.] A dihybrid.

**dihybrid** (dihî'brid) *n.* [Gk. *dis*, twice; L. *hibrida*, mixed offspring.] A cross whose parents differ in two distinct characters; an organism heterozygous regarding two pairs of alleles.

**dikaryon** (dikâ'riôn) *n.* [Gk. *dis*, twice; *karyon*, nucleus.] A pair of nuclei, as in cells of ascogenous hyphae.

**dilatator**,—dilator, *q.v.*

**dilated** (dilâ'têd) *a.* [L. *dilatâre*, to flatten.] Expanded, or flattened; *appl.* parts of insects, etc., with a wide margin.

**dilator** (dilâ'tôr) *n.* [L. *dilatâre*, to expand.] Name *appl.* any muscle that expands or dilates an organ.

**dilophous** (dilôf'ûs) *a.* [Gk. *di*, two; *lophos*, crest.] *Appl.* a tetractinal spicule with two rays forked like a crest.

**diluvial** (dîlû'viâl) *a.* [L. *diluvium*, deluge.] *Pert.* the present, in geological reckoning.

**dimegaly** (dimêg'âlî) *n.* [Gk. *dis*, twice; *megalos*, great.] Condition of having two sizes or a bimodal size frequency; *appl.* spermatozoa, ova.

**dimerous** (dîm'ërûs) *a.* [Gk. *dis*, twice; *meros*, part.] In two parts; having each whorl of two parts; with a two-jointed tarsus.

**dimidiate** (dîmîd'iât) *a.* [L. *dimidius*, half.] Having only one-half developed; having capsule split on one side.

**dimorphism** (dimôr'fizm) *n.* [Gk. *dis*, twice; *morphe*, shape.] Condition of having stamens of two different lengths, of having two different kinds of leaves, flowers, etc.; state of having two different forms according to sex, or of one sex, two different kinds of zooids, or of offspring; of broods which, owing to differing conditions, differ in size or colouring.

**dimyariac** (dimîâr'îk) *a.* [Gk. *dis*, twice; *mys*, muscle.] Having two adductor muscles; dimyarian.

**dinergate** (dînër'gât) *n.* [Gk. *dinein*, to roam; *ergates*, worker.] A soldier ant.

**dineuronic** (dînürôn'îk) *a.* [Gk. *dis*, twice; *neuron*, nerve.] With double innervation; *appl.* chromatophores with concentrating and dispersing nerve fibres.

**dinomic** (dînôm'îk) *a.* [Gk. *dis*, twice; *nomos*, district.] *Appl.* an organism restricted to two of the biogeographical divisions of the globe.

**dioecious** (diê'siûs) *a.* [Gk. *dis*, twice; *oikos*, house.] Having sexes separate; having male and female flowers on different individuals; gonochoristic; exhibiting dioecism or gonochorism.

**dioestrus** (diê'strûs) *n.* [Gk. *dia*, between; *oistros*, gadfly.] The quiescent period between heat periods in polyoestrous animals; dioestrum.

**dionychous** (dī'ōnik'ūs) *a.* [Gk. *di-*, two; *onyx*, nail.] Having two claws, as on tarsi of certain spiders.

**dioptrate** (diōp'trāt) *a.* [Gk. *dis*, twice; *ops*, eye.] Having eyes or ocelli separated by a narrow line.

**dioptric** (diōp'trik) *a.* [Gk. *dioptron*, spying-glass.] *Pert.* transmission and refraction of light; *appl.* structures, as cornea, lens, aqueous and vitreous humors.

**diorchic** (diōr'kik) *a.* [Gk. *dis*, twice; *orchis*, testis.] Having two testes.

**dipetalous** (dipēt'ālūs) *a.* [Gk. *dis*, twice; *petalon*, petal.] Having two petals.

**diphasic** (difā'zik) *a.* [Gk. *dis*, twice; *phainein*, to appear.] *Appl.* extended life cycle of some protozoa, including the active stage; *cf.* monophasic; periodically changing two states or appearances, as of winter and summer pelage or plumage.

**diphycercal** (dif'isēr'kāl) *a.* [Gk. *diphyes*, twofold; *kerkos*, tail.] With a tail in which vertebral column runs straight to tip, thereby dividing the fin symmetrically.

**diphygenetic** (dif'ijēnēt'ik) *a.* [Gk. *diphyes*, twofold; *genes*, begotten.] Producing embryos of two different types, as Dicyemida.

**diphygenic** (dif'ijēn'ik) *a.* [Gk. *diphyes*, twofold; *genos*, descent.] With two types of development.

**diphyletic** (dif'ilēt'ik) *a.* [Gk. *dis*, twice; *phylon*, race.] *Pert.* or having origin in two lines of descent.

**diphyodont** (dif'tödōnt) *a.* [Gk. *diphyes*, twofold; *odous*, tooth.] With deciduous and permanent sets of teeth.

**diplanetary** (diplān'ētāri), **diplanetic** (di'plānēt'ik) *a.* [Gk. *dis*, twice; *planetikos*, wandering.] With two distinct types of zoospores.

**diplanetism** (diplān'ētizm) *n.* [Gk. *dis*, twice; *planetikos*, wandering.] Condition of having two periods of motility in one life history, as of zoospores in some fungi.

**diplarthrous** (diplār'thrūs) *a.* [Gk. *diploos*, double; *arthron*, joint.] With tarsal or carpal bones of one

row articulating with two bones in the other.

**dipleurula** (diploor'ulā) *n.* [Gk. *dis*, twice; *pleuron*, side.] A bilaterally symmetrical larva of echinoderms; an echinopaedium.

**diplobiont** (dip'lōbī'ōnt) *n.* [Gk. *diploos*, double; *bion*, living.] An organism characterised by two kinds of individuals, asexual and sexual.

**diploblastic** (dip'lōblās'tik) *a.* [Gk. *diploos*, double; *blastos*, bud.] Having two distinct germ layers.

**diplocardiac** (dip'lōkār'diāk) *a.* [Gk. *diploos*, double; *kardia*, heart.] With the two sides of the heart quite distinct.

**diplocaulescent** (dip'lōkōlēs'ēnt) *a.* [Gk. *diploos*, double; *kaulos*, stem.] With secondary stems.

**diplochromosome** (dip'lōkrō'mōsōm) *n.* [Gk. *diploos*, double; *chroma*, colour; *soma*, body.] Anomalous chromosome having four chromatids, instead of two, attached to centromere.

**diplodal** (dip'lōdāl) *a.* [Gk. *diploos*, double; *hodos*, way.] Having both prosodus and apodus; *appl.* Porifera.

**diploe** (dip'lōē) *n.* [Gk. *diploe*, double.] The cancellous tissue between outer and inner lamellae of certain skull bones; tail of scorpion; mesophyll.

**diplogangliate** (dip'lōgāng'glīāt) *a.* [Gk. *diploos*, double; *ganglion*, ganglion.] With ganglia in pairs.

**diplogensis** (dip'lōjēn'ēsis) *n.* [Gk. *diploos*, double; *genesis*, descent.] Supposed change in germ plasma that accompanies 'use and disuse' changes occurring in body tissues; development of two parts instead of usual single part.

**diploic** (dip'lō'ik) *a.* [Gk. *diploos*, double.] Occupying channels in cancellous tissue of bones.

**diploid** (dip'lōid) *a.* [Gk. *diploos*, double; *eidos*, form.] Having a double set of chromosomes; *appl.* typical or zygotic somatic number of chromosomes of a species. *n.* A diploid organism; *cf.* haploid.

**diploidisation**,—doubling of number of chromosomes in haploid cells or hyphae.

**diploonema** (dīp'lōnē'mă) *n.* [Gk. *diploos*, double; *nema*, thread.] Double thread of diplotene stage in meiosis.

**diploonephridia** (dīp'lōnēfrīd'īă) *n. plu.* [Gk. *diploos*, double; *nephros*, kidney; *idion*, *dim.*] Nephridia derived partly from ectoderm, partly from mesoderm.

**diploonural** (dīp'lōnūrāl) *a.* [Gk. *diploos*, double; *neuron*, nerve.] Supplied with two nerves.

**diploont** (dīp'lōnt) *n.* [Gk. *diploos*, double; *on*, being.] An organism having diploid somatic nuclei, *opp.* haploont.

**diploperistomous** (dīp'lōpērīs'tōmūs) *a.* [Gk. *diploos*, double; *peri*, around; *stoma*, mouth.] Having a double projection or peristome.

**diplophase** (dīp'lōfāz) *n.* [Gk. *diploos*, double; *phasis*, aspect.] Stage in life history of an organism when nuclei are diploid; sporophyte phase; diplotene stage in meiosis.

**diplophyll** (dīp'lōfil) *n.* [Gk. *diploos*, double; *phyllon*, leaf.] A leaf having palisade tissue on upper and lower side with intermedial spongy parenchyma.

**diploplacula** (dīp'lōplāk'ulă) *n.* [Gk. *diploos*, double; *plakoeis*, flat cake.] A flattened blastula consisting of two layers of cells.

**diplopore** (dīp'lōpōr) *n.* [Gk. *diploos*, double; *poros*, passage.] Respiratory organ in Cystoidea.

**diploptile** (dīp'lōtil, -ptil) *a.* [Gk. *diploos*, double; *ptilon*, feather.] Double neossoptile, without rachis, formed by precocious development of the barbs of the teleoptile.

**diploosis** (dīplō'sis) *n.* [Gk. *diploos*, double.] Doubling of the chromosome number, in syngamy.

**diplosome** (dīp'lōsōm) *n.* [Gk. *diploos*, double; *soma*, body.] A double centrosome lying outside the nuclear membrane; a paired heterochromosome.

**diplosomite** (diplosō'mīt) *n.* [Gk. *diploos*, double; *soma*, body.] Body segment consisting of two annular parts, prozonite and metazonite, in Diplopoda.

**diplosphene** (dīp'lōsfēn) *n.* [Gk. *diploos*, double; *sphen*, wedge.] Wedge-shaped process on neural arch of certain fossil reptiles.

**diplospondylic** (dīp'lōspōndil'ik) *a.* [Gk. *diploos*, double; *sphondylos*, vertebra.] With two centra to each myotome, or with one centrum and well-developed intercentrum; exhibiting diplospondyly.

**diplostemonous** (dīp'lōstēm'ōnūs) *a.* [Gk. *diploos*, double; *stemon*, warp.] With two whorls of stamens in regular alternation with perianth leaves; with stamens double the number of petals.

**diplostichous** (dīplōs'tīkūs) *a.* [Gk. *diploos*, double; *stichos*, row.] Arranged in two rows or series.

**diplopegia** (dīp'lōtē'jīă) *n.* [Gk. *diploos*, double; *tegos*, roof.] An inferior fruit with dry dehiscent pericarp.

**diplotene** (dīp'lōtēn) *a.* [Gk. *diploos*, double; *tainia*, band.] *Appl.* stage in meiosis at which bivalent chromosomes split longitudinally.

**diploxylic** (dīp'lōzil'ik) *a.* [Gk. *diploos*, double; *xylon*, wood.] *Appl.* leaf-trace bundles with inner and outer strands of wood, in certain extinct plants.

**diplozoic** (dīp'lōzō'ik) *a.* [Gk. *diploos*, double; *zoon*, animal.] Bilaterally symmetrical.

**dipnoan** (dīp'nōăn) *a.* [Gk. *dis*, twice; *pnein*, to breathe.] Breathing by gills and lungs.

**diprotodont** (dīprō'tōdōnt) *a.* [Gk. *dis*, twice; *protos*, first; *odous*, tooth.] Having two anterior incisors large and prominent, the rest of incisors and canines being smaller or absent.

**dipteroecidium** (dīp'tērōēsīd'īŭm) *n.* [Gk. *dis*, twice; *pteron*, wing; *kekis*, gall nut; *idion*, *dim.*] Gall caused by a dipterous insect.

**dipterous** (dīp'tērūs) *a.* [Gk. *dis*, twice; *pteron*, wing.] With two wings or wing-like expansions.

**directive mesenteries**,—in Zoantharia, the dorsal and ventral pairs of mesenteries.

**disc** (disk) *n.* [L. *discus*, disc.] Any flattened portion like a disc in shape; middle part of capitulum in Compositae; adhesive tip of tendril; base of sea-weed thallus; circumoral area in many animals; circular areas at opposite poles of many animals; any modification of thalamus; area marking entrance of optic nerve into eye; cup-shaped tactile structures in skin; mass of cells of membrana granulosa which projects into cavity of egg follicle; anisotropic and isotropic parts of contractile fibrils of muscular tissue; disk.

**disc-florets**,—inner florets borne on abbreviated and reduced peduncle in many inflorescences.

**discal** (dis'kāl) *a.* [L. *discus*, disc.] *Pert.* any disc-like structure; *appl.* cross-vein between third and fourth longitudinal veins of insect wing. *n.* A large cell at base of wing of Lepidoptera completely enclosed by wing-nervures, also in some Diptera.

**disciflorous** (dis'kiflō'rūs, dis'iflō'rūs) *a.* [L. *discus*, disc; *flos*, flower.] With flowers in which receptacle is large and disc-like.

**disclimax** (dis'kli'māks) *n.* [Gk. *dis*, double; *climax*, ladder.] Disturbance climax, stage in plant succession replacing or modifying true climax, usually due to animal and human agency; *e.g.* cultivated crops.

**discoblastic** (dis'kōblās'tik) *a.* [Gk. *diskos*, disc; *blastos*, bud.] *Pert.* meroblastic eggs in which area of segmentation is disc-shaped.

**discoblastula** (dis'kōblās'tulā) *n.* [Gk. *diskos*, disc; *blastos*, bud.] A blastula formed from a meroblastic egg with disc-like blastoderm.

**discocarp** (dis'kōkārp) *n.* [Gk. *diskos*, disc; *karpōs*, fruit.] Special

enlargement of thalamus below calyx; apothecium.

**discocasters** (disk'ōktās'tērz) *n. plu.* [Gk. *diskos*, disc; *okto*, eight; *aster*, star.] Sponge spicules with eight rays terminating in discs, each disc corresponding in position to corners of a cube; modified hexactines.

**discodactylous** (dis'kōdāk'tilūs) *a.* [Gk. *diskos*, disc; *daktylos*, finger.] With sucker at end of digit.

**discohextactine** (dis'kōhēksāk'tīn) *n.* [Gk. *diskos*, disc; *hex*, six; *aktis*, ray.] A sponge spicule with six equal rays meeting at right angles.

**discohextaster** (dis'kōhēksās'tēr) *n.* [Gk. *diskos*, disc; *hex*, six; *aster*, star.] A hexactine with rays ending in discs.

**discoid** (dis'koid) *a.* [Gk. *diskos*, disc; *eidos*, form.] Flat and circular; disc-shaped.

**discoidal** (diskoi'dāl) *a.* [Gk. *diskos*, disc; *eidos*, form.] Disc-like; *appl.* segmentation in which blastoderm forms a one-layered disc or cap which spreads over yolk; *appl.* placenta.

**discontinuity** (dis'kōntīnū'itī) *n.* [O.F. *discontinuer*; from L. *dis*, asunder; *continuare*, to continue.] Occurrence in two or more separate areas or geographical regions; disjunction.

**discontinuous variation**,—mutation, *q.v.*

**disconula** (diskōn'ulā) *n.* [Gk. *diskos*, disc.] Eight-rayed stage in larval development of certain Coelentera.

**discooctaster**,—discoctaster, *q.v.*

**discoplacenta** (dis'kōplāsēn'tā) *n.* [L. *discus*, disc; *placenta*, placenta.] A placenta with villi on a circular cake-like disc.

**discoplasm** (dis'kōplāzm) *n.* [Gk. *diskos*, disc; *plasma*, form.] Colorless framework or stroma of a red blood corpuscle.

**discorhabd** (dis'kōrābd) *n.* [Gk. *diskos*, disc; *rhabdōs*, rod.] A linear sponge spicule with disc-like outgrowths or whorls of spines.

**discus proligerus**,—in a Graafian follicle, the mass of cells of membrana granulosa in which the ovum is embedded.

**disjunct** (dīsjŭngkt') *a.* [L. *disiunctus*, separated.] With body regions separated by deep constrictions.

**disjunction** (dīsjŭngk'shŭn) *n.* [L. *disiunctus*, separated.] Divergence of paired chromosomes at anaphase; geographical distribution in discontinuous areas.

**disjunctive symbiosis**,—a mutually helpful condition of symbiosis although there is no direct connection between the partners.

**disjunctor** (dīsjŭngk'tŏr) *n.* [L. *disiunctus*, separated.] Weak connective structure and zone of separation between successive conidia; 'bridge'.

**disk** (dīsk) *n.* [Gk. *diskos*, disc.] *See* disc.

**disomic** (dī'sŏmīk) *a.* [Gk. *dis*, twice; *soma*, body.] *Pert.* or having two homologous chromosomes, or genes.

**disoperation** (dīs'ŏpērā'shŭn) *n.* [L. *dis*, asunder; *opus*, work.] Co-actions resulting in disadvantage to individual or to group; indirectly harmful influence of organisms upon each other.

**dispermic** (dīspēr'mīk) *a.* [Gk. *dis*, twice; *sperma*, seed.] *Pert.*, or by, two spermatozoa; *appl.* fertilisation of an ovum.

**dispermous** (dīspēr'mūs) *a.* [Gk. *dis*, twice; *sperma*, seed.] Having two seeds.

**dispermy** (dīspēr'mī) *n.* [Gk. *dis*, twice; *sperma*, seed.] The entrance of two spermatozoa into an ovum.

**dispersal** (dīspēr'sāl) *n.* [L. *dispergere*, to disperse.] The actual scattering or distributing of organisms on earth's surface; transport of diaspores.

**disphotic**,—dysphotic.

**dispireme** (dīspī'rēm) *n.* [Gk. *dis*, twice; *speirema*, skein.] The stage of karyokinesis in which each

daughter nucleus has given rise to a spireme.

**displacement** (dīsplās'mēnt) *n.* [O.F. *desplacier*, to displace.] An abnormal position of any part of a plant due to its shifting from its normal place of insertion.

**disporocystid** (dī'spŏrōsīs'tīd) *a.* [Gk. *dis*, twice; *sporos*, seed; *kystis*, bladder.] *Appl.* oocyst of Sporozoa when two sporocysts are present.

**disporous** (dīspŏ'rūs) *a.* [Gk. *dis*, twice; *sporos*, seed.] With two spores.

**dissected** (dīsĕk'tēd) *a.* [L. *dissecare*, to cut open.] Having lamina cut into lobes, incisions reaching nearly to midrib; with parts displayed.

**dissepiment** (dīs'sĕp'īmēnt) *n.* [L. *disssaepire*, to separate.] The partition found in some compound ovaries; in corals, one of oblique calcareous partitions stretching from septum to septum and closing interseptal loculi below.

**dissilient** (dīsīl'ient) *a.* [L. *dissilire*, to burst asunder.] Springing open; *appl.* capsules of various plants which dehisce explosively.

**dissimilation** (dīs'sīmilā'shŭn) *n.* [L. *dissimilis*, unlike.] Katabolism, *q.v.*

**dissoconch** (dīs'ŏkŏngk') *n.* [Gk. *dissos*, double; *kongche*, shell.] The shell of a veliger larva.

**dissogeny** (dīsŏj'ĕnī) *n.* [Gk. *dissos*, double; *genos*, descent.] Condition of having two sexually mature periods in the same animal—one in larva, one in adult; also disso-gony.

**distad** (dīs'tād) *adv.* [L. *distare*, to stand apart; *ad*, to.] Towards or at a position away from centre or from point of attachment; in a distal direction.

**distal** (dīs'tāl) *a.* [L. *distare*, to stand apart.] Standing far apart, distant, *appl.* bristles, etc.; *pert.* end of any structure farthest from middle line of organism or from point of attachment. *Opp.* proximal.

**distalia** (distā'liā) *n. plu.* [L. *distare*, to stand apart.] The distal or third row of carpal or of tarsal bones.

**distance receptor**,—a sense-organ which reacts to stimuli emanating from distant objects; an olfactory, visual, or auditory receptor; disticeptor, distoceptor, teleceptor.

**distichalia** (distikā'liā) *n. plu.* [Gk. *distichos*, with two rows.] In Crinoidea, the secondary brachialia.

**distichous** (dis'tikūs) *a.* [Gk. *distichos*, with two rows.] Two-ranked; *appl.* alternate leaves, so arranged that first is directly below third.

**distipharynx** (dis'tifār'ingks) *n.* [L. *distans*, standing apart; Gk. *pharyngx*, gullet.] A short tube formed by union of epi- and hypopharynx in some insects.

**distiproboscis** (dis'tiprōbōs'is) *n.* [L. *distans*, standing apart; Gk. *proboskis*, trunk.] Distal portion of insect proboscis, part of ligula.

**dististyle** (dis'tistil) *n.* [L. *distans*, standing apart; Gk. *stylos*, pillar.] Distal part or style borne on basistyle, *q.v.*, of gonostyle in mosquitoes.

**distoceptor** (dis'tōsēp'tōr) *n.* [L. *distare*, to stand apart; *recipere*, to receive.] A distance receptor, *q.v.*; teleceptor.

**distractile** (distrāk'til) *a.* [L. *distractus*, pulled asunder.] Widely separate; *appl.* usually to long-stalked anthers.

**distribution** (dis'tribū'shūn) *n.* [L. *distributus*, divided.] Range of an organism or group in biogeographical divisions of globe.

**disymmetrical** (disīmēt'rikāl) *a.* [Gk. *dis*, twice; *syn*, with; *metron*, measure.] Biradial, *q.v.*

**dithecal** (dithē'kāl) *a.* [Gk. *dis*, twice; *theke*, box.] Two-celled, as anthers.

**ditokous** (dit'ōkūs) *a.* [Gk. *dis*, twice; *tokos*, birth.] Producing two at a time, either eggs or young.

**ditrematous** (ditrē'mātūs) *a.* [Gk. *dis*, twice; *trema*, opening.] With separate genital openings; with anus and genital openings separate.

**ditrochous** (dit'rōkūs) *a.* [Gk. *dis*, twice; *trochos*, runner.] With a divided trochanter.

**diuresis** (diūrē'sis) *n.* [Gk. *dia*, through; *ouron*, urine.] Increased or excessive secretion of urine.

**diurnal** (diūr'nāl) *a.* [L. *dies*, day.] Opening during the day only; active in the day-time.

**divaricate** (divār'ikāt) *a.* [L. *divaricatus*, stretched apart.] Widely divergent; bifid; forked.

**divaricators** (divār'ikātōrz) *n. plu.* [L. *divaricatus*, stretched apart.] Muscles stretching from ventral valve to cardinal process, in brachiopods; muscles in avicularia.

**divergency** (divēr'jēnsi) *n.* [L. *divergere*, to bend away.] The fraction of a stem circumference, usually constant for a species, which separates two consecutive leaves in a spiral.

**divergent** (divēr'jent) *a.* [L. *divergere*, to bend away.] Separated from one another; *appl.* leaves.

**diverticulum** (div'ertik'ulūm) *n.* [L. *de*, away; *vertere*, to turn.] A tube or sac, blind at distal end, branching off from a canal or cavity.

**divided** (divī'dēd) *a.* [L. *dividere*, to divide.] With lamina cut by incisions reaching midrib; *appl.* leaves.

**dizoic** (dizō'ik) *a.* [Gk. *dis*, twice; *zoon*, animal.] *Pert.* spore containing two sporozoites.

**dizygotic** (dī'zigōt'ik) *a.* [Gk. *dis*, twice; *zygotes*, yoked.] Originating from two fertilised ova; *appl.* twins; dizygous; binovular.

**Dobie's line**,—Z-disc or telophragma.

**dodecagynous** (dōdēkāj'ynūs) *a.* [Gk. *dodeka*, twelve; *gyne*, woman.] Having twelve pistils.

**dodecamerous** (dōdēkām'ērūs) *a.* [Gk. *dodeka*, twelve; *meros*, part.] Having each whorl composed of twelve parts.

**dodecandrous** (dōdēkān'drūs) *a.* [Gk. *dodeka*, twelve; *aner*, man.] Having at least twelve stamens.

- dolabriform** (dölä'brifôrm) *a.* [L. *dolabra*, mattock; *forma*, shape.] Axe-shaped.
- dolichocephalic** (döl'ikökëfäl'ik, -sëf-) *a.* [Gk. *dolichos*, long; *kephale*, head.] Long-headed; with cephalic index of under 75; *cf.* brachycephalic.
- dolichohieric** (döl'iköhi'ërik) *a.* [Gk. *dolichos*, long; *hieros*, sacred.] With sacral index below 100; *cf.* platyhieric.
- dolichostylous** (döl'ikösti'lüs) *a.* [Gk. *dolichos*, long; *stylos*, pillar.] *Pert.* long-styled anthers in dimorphic flowers.
- dolioform** (döl'liöfôrm) *a.* [L. *dolium*, wine-cask; *forma*, shape.] Barrel-shaped.
- dominant** (döm'inänt) *a.* [L. *dominans*, ruling.] *Appl.* plants which by their extent determine biotic conditions in a given area; *appl.* species prevalent in a particular community, or at a given period; *appl.* character possessed by one parent which in a hybrid masks the corresponding alternative character derived from the other parent; *appl.* the parental allele manifested in the F<sub>1</sub> heterozygote; *opp.* recessive; *appl.* stimulated part of brain when excitation is increased by stimuli usually inducing other reflexes; *appl.* parts of body controlling less active parts.
- dominator** (döm'inätör) *n.* [L. *dominator*, ruler.] A broad band of the spectrum which evokes sensation of luminosity in light-adapted eye; *cf.* modulator.
- dopa** (dö'pä) *n.* [Dihydroxyphenylalanine.] An amino-acid formed from tyrosine by action of ultraviolet rays, and oxidised by dopa-oxidase or dopase to a red precursor of melanin, as in basal layers of epidermis; C<sub>9</sub>H<sub>11</sub>O<sub>4</sub>N.
- dormancy** (dör'mänsi) *n.* [F. *dormir*, from L. *dormire*, to sleep.] A resting or quiescent condition; reduction in protoplasmic activity due to carbon dioxide concentration, *appl.* seeds; hibernation and aestivation.
- dormancy callus**,—callose deposited on sieve areas at the onset of winter.
- dorsad** (dör'säd) *adv.* [L. *dorsum*, back; *ad*, to.] Towards back or dorsal surface; *opp.* ventrad.
- dorsal** (dör'säl) *a.* [L. *dorsum*, back.] *Pert.* or lying near back, *opp.* ventral surface; *pert.* surface farthest from axis; upper surface of thallus or prothallus of ferns, etc.
- dorsalis** (dörsä'lis) *n.* [L. *dorsum*, back.] The artery which supplies the back of any organ.
- dorsiferous** (dörsif'ërus) *a.* [L. *dorsum*, back; *ferre*, to carry.] With sori on back of leaf; carrying the young on the back.
- dorsifixed** (dör'sifik'st) *a.* [L. *dorsum*, back; *fixere*, to fix.] Having filament attached to back of anther.
- dorsigrade** (dör'sigräd) *a.* [L. *dorsum*, back; *gradus*, step.] Having back of digit on the ground when walking.
- dorsispinal** (dör'sispi'näl) *a.* [L. *dorsum*, back; *spina*, spine.] *Pert.* or referring to back and spine.
- dorsiventral** (dör'söven'träl) *a.* [L. *dorsum*, back; *venter*, belly.] With upper and lower surfaces distinct; bifacial; *cf.* dorsoventral.
- dorsocentral** (dör'sösën'träl) *a.* [L. *dorsum*, back; *centrum*, centre.] *Pert.* mid-dorsal surface; *pert.* aboral surface of echinoderms.
- dorsolumbar** (dör'sölüm'bär) *a.* [L. *dorsum*, back; *lumbus*, loin.] *Pert.* lumbar region of back.
- dorsoumbonal** (dör'söüm'bönäl) *a.* [L. *dorsum*, back; *umbo*, shieldboss.] Lying on the back near the umbo.
- dorsoventral** (dör'söven'träl) *a.* [L. *dorsum*, back; *venter*, belly.] *Pert.* structures which stretch from dorsal to ventral surface; *cf.* dorsiventral.
- dorsulum** (dör'sülüm) *n.* [*Dim.* of L. *dorsum*, back.] Upper surface lying between collar and scutellum; mesonotum.
- dorsum** (dör'süm) *n.* [L. *dorsum*, back.] The sulcular surface of Anthozoa; tergum or notum of insects and crustaceans; inner



- margin of insect wing; the back of higher animals.
- dorylaner** (dōr'ilānēr) *n.* [Gk. *dory*, spear; *aner*, male.] An exceptionally large male ant of driver-ant group.
- doublure** (dooblūr') *n.* [F. *doublure*, lining.] The reflected margin of carapace in Trilobita and Xiphosura.
- Doyère's cone** ([*L. Doyère*, French physiologist]. End-plate or eminence where nerve fibre branches and enters sarcolemma.
- drepanium** (drēpā'nīūm) *n.* [Gk. *drepane*, sickle.] A helicoid cyme with secondary axes developed in a plane parallel to that of main peduncle and its first branch.
- drift** (drift) *n.* [A.S. *drifan*, to drive.] Transported, *opp.* bed-rock, soils; process of change in gene frequencies in a population of breeding individuals; Sewall Wright effect; genetical-automatic process.
- dromaeognathous** (drōm'eōg'nāthūs) *a.* [Gk. *dromein*, to run; *gnathos*, jaw.] Having a palate in which palatines and pterygoids do not articulate, owing to intervention of vomer.
- dromotropic** (drōm'ōtrōp'ik) *a.* [Gk. *dromos*, course; *trope*, turn.] Bent in a spiral; influencing nerve conductivity.
- drone** (drōn) *n.* [A.S. *dran*.] The male bee.
- dropper** (drōp'ēr) *n.* [A.S. *dreópan*, to drop.] Rhizomatous downward outgrowth of a bulb, which may form a new bulb.
- drupaceous** (droopā'shūs) *a.* [Gk. *dryppa*, olive.] *Pert.* drupe; bearing drupes; drupe-like.
- drupe** (droop) *n.* [Gk. *dryppa*, olive.] A superior, one-celled fruit with one or two seeds and the pericarp differentiated into a thin epicarp, a fleshy sarcocarp, and a hard endocarp, as of plum.
- drupel** (droop'ēl) *n.* [Gk. *dryppa*, olive.] An individual component of aggregate fruit, as of raspberry; also drupelet.
- dry** (dri) *a.* [A.S. *dryge*, dry.] *Appl.* achenial, capsular, and schizocarpic fruits. *Opp.* succulent.
- drymophytes** (dri'mōfīts) *n. plu.* [Gk. *drymos*, coppice; *phyton*, plant.] Small trees, bushes, and shrubs.
- duct** (dūkt) *n.* [L. *ducere*, to lead.] Any tube which conveys fluid or other substance; a tube formed by a series of cells which have lost their walls at the points of contact; ductus.
- ductless glands**,—glands which do not communicate with any organ directly by means of a duct; endocrine organs.
- ductule** (dūk'tūl) *n.* [L. *ducere*, to lead.] A minute duct; fine thread-like terminal portion of a duct.
- ductus** (dūk'tūs) *n.* [L. *ducere*, to lead.] Duct, *q.v.*
- ductus deferens**,—vas deferens.
- ductus ejaculatorius**,—a narrow muscular tube at end of vas deferens in various invertebrates.
- Dufour's gland** [*L. Dufour*, French entomologist]. An alkaline gland with duct leading to terebra or sting of certain Hymenoptera.
- dulosis** (dū'lōsis) *n.* [Gk. *doulosis*, subjugation.] Slavery, among ants.
- dumb-bell bone**,—prevomer, *q.v.*
- duodenal** (dū'ōdē'nāl) *a.* [L. *duodeni*, twelve each.] *Pert.* duodenum.
- duodenum** (dū'ōdē'nūm) *n.* [L. *duodeni*, twelve each.] That portion of small intestine next to pyloric end of stomach.
- duplex** (dū'plēks) *a.* [L. *duplex*, two-fold.] Double; compound, *appl.* flowers; diploid; having two dominant genes, in polyploidy; consisting of two distinct structures; having two distinct parts.
- duplication** (dū'plikā'shūn) *n.* [L. *duplex*, double.] Chorisism, *q.v.*; a translocated chromosome fragment attached to one of normal set.
- duplicature** (dū'plikātūr) *n.* [L. *duplex*, double.] A circular fold near base of protrusible portion of a polyzoan polypide.

**duplident** (dūplīs'idēt) *a.* [L. *duplex*, double; *dens*, tooth.] With two pairs of incisors in upper jaw, one behind the other.

**duplicity** (dūplīs'itī) *n.* [L. *duplīciter*, doubly.] Condition of being two-fold; *appl.* theory that cones are the photopic, or colour, receptors, and rods the scotopic, or brightness, receptors.

**duplicodentate** (dū'plikōdēn'tāt) *a.* [L. *duplex*, double; *dens*, tooth.] With marginal teeth on leaf bearing smaller teeth-like structures.

**dura mater** (dū'rā mā'tēr) *n.* [L. *dura*, hard; *mater*, mother.] The tough membrane lining the whole cerebro-spinal cavity.

**dura spinalis**,—the tough membrane lining the spinal canal.

**dural** (dū'rāl) *a.* [L. *dura*, hard.] *Pert.* dura mater; *appl.* sheath of optic nerve.

**duramen** (dūrā'mēn) *n.* [L. *durare*, to harden.] The hard, darker central region of a tree-stem; the heart-wood.

**duvet** (dūvā') *n.* [F. *duvet*, down.] Downy coating, as soft matted coating by certain fungi.

**dwarf male**,—small three- or four-celled plant formed from androspore of *Oedogonium*; a small, usually simply formed, individual in many classes of animals, either free or carried by the female.

**dyad** (dī'ād) *n.* [Gk. *dyas*, two.] The half of a tetrad group; a bivalent chromosome.

**dynamic** (dīnām'ik) *a.* [Gk. *dynamis*, power.] Producing or manifesting activity, *opp.* static; *appl.* specific dynamic action, the calorigenic action of food, increasing metabolism above basal rate.

**dynamoplastic** (dī'nāmoplās'tik) *a.* [Gk. *dynamis*, power; *plastos*, formed.] *Appl.* active type of energid-product; *opp.* paraplasic.

**dyogenic** (dīsjēn'ik) *a.* [Gk. *dys-geneia*, low birth.] *Pert.* tending towards, or productive of, racial degeneration; kakogenic, *opp.* eugenic.

**dysmerism** (dīs'mērīzm) *n.* [Gk. *dys-*, mis-; *meros*, part.] An aggregate of unlike parts.

**dysmerogenesis** (dīs'mērōjēn'esis) *n.* [Gk. *dys-*, mis-; *meros*, part; *genesis*, descent.] Segmentation resulting in unlike parts.

**dysphotic** (dīs'fōtik) *a.* [Gk. *dys-*, mis-; *phos*, light.] Dim; *appl.* zone, waters at depths between 80 and 600 metres, between euphotic and aphotic zones, *q.v.*; lower layer of photic zone.

**dysploid**,—aneuploid, *q.v.*

**dyspnoea** (dispnē'ā) *n.* [Gk. *dyspnoos*, breathless.] Difficulty in breathing.

**dysteleology** (dīs'tēlōl'ōjī) *n.* [Gk. *dys-*, mis-; *teleos*, ended; *logos*, discourse.] Haeckel's doctrine of purposelessness in Nature; appearance of uselessness, as of certain organs or other structures; frustration of function.

**dystrophic** (dīstrōf'ik) *a.* [Gk. *dys-*, mis-; *trephein*, to nourish.] Wrongly or inadequately nourished; inhibiting adequate nutrition; *pert.* faulty nutrition.

**Dzierzon theory** [*J. Dzierzon*, Silesian apiculturist]. Belief that males of honey-bee are always produced from unfertilised eggs.

**ear** (ēr) *n.* [A.S. *éare*.] The auditory organ; among invertebrates, the various structures supposed to have an auditory function; the specialised tufts of hair or feathers which are close to, or similar to an external ear or pinna; an ear-shaped structure; the spike of grasses, usually of cereals.

**eared** (ērd) *n.* [A.S. *éare*.] Having external ears or pinnae; with tufts of feathers resembling ears; having long bristles or processes, as in grains of corn; auriculate.

**ebracteate** (ēbrāk'tēāt), **ebracteolate** (ēbrāk'tēōlāt) *a.* [L. *ex*, out of; *bractea*, thin plate.] Without bracts; without bracteoles.

**ecad**,—oecad, *q.v.*

**ecalcarate** (ēkāl'kārāt) *a.* [L. *ex*, out of; *calcar*, spur.] Having no spur or spur-like process.

**ecardinal** (ēkār'dīnāl) *a.* [L. *ex*, out of; *cardo*, hinge.] Having no hinge; also ecardinate.

**ecarinate** (ēkār'īnāt) *a.* [L. *ex*, out of; *carina*, keel.] Not furnished with keel or keel-like ridge.

**ecaudate** (ēkō'dāt) *a.* [L. *ex*, out of; *cauda*, tail.] Without a tail.

**ecblastesis** (ēk'blāstēs'is) *n.* [Gk. *ek*, out of; *blastos*, bud.] Proliferation of main axis of inflorescence.

**eccritic** (ēkkrīt'ik) *a.* [Gk. *ekkrinein*, to expel, to select.] Causing or *pert.* excretion; preferred, *appl.* temperature, etc.

**ecdemie** (ēkdēm'ik) *a.* [Gk. *ek*, out of; *demos*, people.] Not native.

**ecderon** (ēk'dērōn) *n.* [Gk. *ek*, out; *deros*, skin.] The outer or epidermal layer of skin.

**ecderonic** (ēkdērōn'ik) *a.* [Gk. *ek*, out; *deros*, skin.] Ectodermic; epiblastic.

**ecdysial** (ēkdīs'iāl) *a.* [Gk. *ekdysai*, to strip.] *Pert.* ecdysis; *appl.* fluid between old and new cuticle which aids in disintegration of old cuticle, moulting fluid; *appl.* line along which cuticle splits in moulting; *appl.* glands, Verson's glands, secreting moulting fluid.

**ecdysis** (ēk'dīs'is) *n.* [Gk. *ekdysai*, to strip.] The act of moulting a cuticular layer or structure; *cf.* endysis.

**ece**,—oike, *o.v.*

**ecesis**,—oikesis, *g.v.*

**echard** (ēkār'd) *n.* [Gk. *echein*, to keep; *ardo*, I water.] Soil water not available for plant growth; *cf.* chresard, holard.

**echinate** (ēk'īnāt) *a.* [Gk. *echinos*, hedgehog.] Furnished with spines or bristles.

**echinenone** (ēkīn'ēnōn) *n.* [Gk. *echinos*, sea-urchin.] A carotenoid pigment of sea-urchin gonads, a provitamin A.

**echinochrome** (ēk'īnōkrōm) *n.* [Gk. *echinos*, sea-urchin; *chroma*,

colour.] A red-brown respiratory pigment of echinoderms;  $C_{12}H_{11}O_7$ .

**echinococcus** (ēk'īnōkōk'ūs) *n.* [Gk. *echinos*, spine; *kokkos*, berry.] A vesicular metacestode developing a number of daughter cysts, each with many heads.

**echinoid** (ēk'īnoid) *a.* [Gk. *echinos*, sea-urchin; *eidōs*, form.] *Pert.* or like sea-urchins.

**echinopaedium** (ēk'īnōpē'diūm) *n.* [Gk. *echinos*, sea-urchin; *paidion*, young child.] Dipleurula, *q.v.*

**echinopluteus** (ēk'īnōploot'ēūs) *n.* [L. *echinus*, sea-urchin; *pluteus*, shed.] Larva or pluteus of echinoids, from supposed resemblance to an upturned easel.

**echinulate** (ēk'īn'ulāt) *a.* [Gk. *echinos*, spine.] Having small spines; having pointed outgrowths, *appl.* bacterial cultures.

**echolocation** (ēk'ōlōkā'shūn) *n.* [L. *echo*, echo; *locare*, to place.] Location of objects by means of echos, as of supersonic sounds emitted by animals, *e.g.* by bats.

**eclipse** (ēklips') *n.* [Gk. *ekleipein*, to leave incomplete.] Plumage assumed after spring moult, as in drake.

**eclosion** (ēklō'zhūn) *n.* [L. *e*, out; *clausus*, shut.] Hatching from an egg or imago.

**eco**,—see also *oeco*-, *oiko*-.

**ecobiotic** (ē'kōbiōt'ik) *a.* [Gk. *oikos*, household; *biosis*, manner of life.] *Appl.* adaptation to particular mode of life within a habitat.

**ecodeme** (ē'kōdēm) *n.* [Gk. *oikos*, household; *demos*, people.] A deme occupying a particular ecological habitat.

**ecoid**,—oecoid, *g.v.*

**ecology** (ēkōl'ōj) *n.* [Gk. *oikos*, household; *logos*, discourse.] That part of biology which deals with relationship between organisms and their surroundings; bionomics.

**economic density**,—of a population, the number of individuals per unit of the inhabited area, *opp.* population density in an area only partly inhabited.

**ecostate** (ĕkōs'tāt) *a.* [L. *e*, out; *costa*, rib.] Without costae; not costate.

**ecosystem** (ĕ'kōsis'tem) *n.* [Gk. *oikos*, household; *systema*, composite whole.] Ecological system formed by the interaction of co-acting organisms and their environment.

**ecotone** (ĕ'kōtōn) *n.* [Gk. *oikos*, household; *tonos*, brace.] A transitional species in intermediate area between two associations; the boundary line or transitional area between two communities.

**ecotope** (ĕ'kōtōp) *n.* [Gk. *oikos*, household; *topos*, place.] A particular kind of habitat within a region.

**ecotype** (ĕ'kōtīp) *n.* [Gk. *oikos*, household; *typos*, pattern.] A biotype resulting from selection in a particular habitat; habitat type.

**ecphoria** (ĕkfō'riā) *n.* [Gk. *ekphorion*, produce.] The revival of a latent memory pattern or engram.

**ecsoma** (ĕksō'mā) *n.* [Gk. *ek*, from out of; *soma*, body.] Retractable posterior part of body in certain trematodes.

**ectad** (ĕk'tād) *adv.* [Gk. *ektos*, outside; L. *ad*, towards.] Towards the exterior; outwards externally. *Opp.* entad.

**ectadenia** (ĕk'tādē'nīā) *n. plu.* [Gk. *ektos*, outside; *aden*, gland.] Ectodermal accessory genital glands in insects; *cf.* mesadenia.

**ectal** (ĕk'tāl) *a.* [Gk. *ektos*, outside.] Outer; external; *appl.* layer or membrane on margin of exciple. *Opp.* ental.

**ectamnion** (ĕktām'nīōn) *n.* [Gk. *ektos*, outside; *amnion*, foetal membrane.] Ectodermal thickening in proamnion, beginning of head-fold.

**ectendotrophic** (ĕk'tēndōtrōf'ik) *a.* [Gk. *ectos*, without; *endon*, within; *trophe*, nourishment.] Partly ectotrophic and partly endotrophic, *appl.* mycorrhizic fungus.

**ectental line**,—the line where ecto-

derm and endoderm meet at blastopore of a gastrula.

**ectepicondylar** (ĕkt'ĕpikōn'dilār) *a.* [Gk. *ektos*, outside; *epi*, upon; *kondylos*, knob.] *Appl.* radial foramen of humerus.

**ectethmoid** (ĕktēth'moid) *n.* [Gk. *ektos*, outside; *ethmos*, sieve; *eidōs*, form.] Lateral ethmoid bone.

**ecthoraeum** (ĕk'thōrē'ūm) *n.* [Gk. *ekthroskein*, to leap out.] The thread of a nematocyst.

**ectoblast** (ĕk'toblāst) *n.* [Gk. *ektos*, outside; *blastos*, bud.] Epiblast, *q.v.*

**ectobronchus** (ĕk'tōbrōng'kūs) *n.* [Gk. *ektos*, outside; *brongchos*, windpipe.] Lateral branch of main bronchus in birds; also ectobronchium.

**ectocarpous** (ĕk'tōkār'pūs) *a.* [Gk. *ektos*, outside; *karpōs*, fruit.] Having gonads of ectodermal origin.

**ectochondrostosis** (ĕk'tōkōndrōstō'sis) *n.* [Gk. *ektos*, outside; *chondros*, cartilage; *osteon*, bone.] Deposition of lime-salts beginning in perichondrium and gradually invading cartilage.

**ectochone** (ĕk'tōkōnē) *n.* [Gk. *ektos*, outside; *choane*, funnel.] A funnel-shaped chamber into which lead the ostia in certain sponges.

**ectocoelic** (ĕk'tōsē'lik) *a.* [Gk. *ektos*, outside; *koilos*, hollow.] *Pert.* structures situated outside the enteron of coelenterates.

**ectocondyle** (ĕk'tōkōn'dfl) *n.* [Gk. *ektos*, outside; *kondylos*, knob.] The outer condyle of a bone.

**ectocranial** (ĕk'tōkrā'nīāl) *a.* [Gk. *ektos*, outside; *kranion*, skull.] *Pert.* outside of skull.

**ectocuneiform** (ĕk'tōkūnē'ifōrm) *n.* [Gk. *ektos*, outside; L. *cuneus*, wedge; *forma*, shape.] A bone in distal row of tarsus; third cuneiform.

**ectocyst** (ĕk'tōsist) *n.* [Gk. *ektos*, outside; *kystis*, bladder.] Outer layer of zoecium in Polyzoa; outer covering of encysted Protozoa; epicyst.

**ectoderm** (ĕk'tōdērm) *n.* [Gk. *ektos*, outside; *derma*, skin.] The outer

- layer of a multicellular animal; the epidermis in higher mammals.
- ecto-ethmoid**, —ectethmoid, *q.v.*
- ectogenesis** (ĕk'tōjĕn'ĕsis) *n.* [Gk. *ektos*, outside; *genesis*, descent.] Embryonic development outside the maternal organism; development in an artificial environment.
- ectogenous** (ĕktōj'ĕnūs) *a.* [Gk. *ektos*, outside; *genos*, birth.] Able to live an independent life; originating outside the organism.
- ectoglia** (ĕktōglī'ā) *n.* [Gk. *ektos*, outside; *glia*, glue.] An outer layer in central nervous system.
- ectolecithal** (ĕk'tōlē'sīthāl) *a.* [Gk. *ektos*, outside; *lekithos*, yolk of egg.] Having yolk surrounding formative protoplasm.
- ectoloph** (ĕk'tōlōf) *n.* [Gk. *ektos*, outside; *lophos*, crest.] The ridge stretching from paracone to metacone in a lophodont molar.
- ectomere** (ĕk'tōmĕr) *n.* [Gk. *ektos*, outside; *meros*, part.] An epiblast cell which gives rise to ectoderm.
- ectomy** (ĕk'tōmī). [Gk. *ek*, out; *temnein*, to cut.] Suffix signifying an excision, *e.g.* thyroidectomy, gonadectomy, etc.
- ectoneural** (ĕk'tōnūr'al) *a.* [Gk. *ektos*, outside; *neuron*, nerve.] *Appl.* system of oral ring, radial, and subepidermal nerves in echinoderms.
- ectoparasite** (ĕk'tōpār'āsīt) *n.* [Gk. *ektos*, outside; *para*, beside; *sitos*, food.] A parasite that lives on the exterior of an organism.
- ectopatagium** (ĕk'tōpātājī'ūm) *n.* [Gk. *ektos*, outside; *L. patagium*, border.] The part of the wing-like membrane of bats which is carried on metacarpals and phalanges.
- ectophyte** (ĕk'tōfīt) *n.* [Gk. *ektos*, outside; *phyton*, plant.] An external plant parasite.
- ectopic** (ĕktōp'īk) *a.* [Gk. *ek*, out of; *topos*, place.] Not in normal position; *appl.* organs, gestation, etc. *Opp.* entopic.
- ectopic pairing**, —pairing between bands located in different regions of a chromosome.
- ectoplasm** (ĕk'tōplāzm) *n.* [Gk. *ektos*, outside; *plasma*, mould.] The external layer of protoplasm in a cell, usually modified; ectosarc of protozoan cell; layer next cell-wall.
- ectoplast** (ĕk'tōplāst) *n.* [Gk. *ektos*, outside; *plastos*, formed.] The protoplasmic film or plasma-membrane just within the true wall of a cell.
- ectopterygoid** (ĕk'tōtĕr'īgoid, -ptĕr-) *n.* [Gk. *ektos*, outside; *pteryx*, wing; *eidōs*, form.] A ventral membrane bone behind palatine and extending to quadrate; mesopterygoid; os transversum between pterygoid and maxilla in many reptiles and in some fishes; *cf.* entopterygoid.
- ectosarc** (ĕk'tōsārk) *n.* [Gk. *ektos*, outside; *sarx*, flesh.] The external layer of protoplasm in a protozoan.
- ectosome** (ĕk'tōsōm) *n.* [Gk. *ektos*, outside; *soma*, body.] The enveloping portion of a sponge containing no flagellated chambers; a type of cell granule.
- ectosphere** (ĕk'tōsfĕr) *n.* [Gk. *ektos*, outside; *sphaira*, globe.] The outer zone of attraction sphere.
- ectospor** (ĕk'tōspōr) *n.* [Gk. *ektos*, outside; *sporos*, seed.] The spore formed at end of each sterigma in Basidiomycetes.
- ectostosis** (ĕk'tōstō'sis) *n.* [Gk. *ektos*, outside; *osteon*, bone.] Formation of bone in which ossification begins under the perichondrium and either surrounds or replaces the cartilage.
- ectotheca** (ĕk'tōthĕkā) *n.* [Gk. *ektos*, outside; *theke*, cup.] Outer coating of gonotheca in certain hydroids.
- ectotrachea** (ĕk'tōtrākĕ'ā) *n.* [Gk. *ektos*, outside; *L. trachea*, wind-pipe.] An epithelial layer on outer side of insect tracheae.
- ectotrophic** (ĕk'tōtrōf'īk) *a.* [Gk. *ektos*, outside; *trephein*, to nourish.] Finding nourishment from outside; *appl.* fungi which surround roots of host with hyphae. *Opp.* endotrophic.

**ectoturbinal** (ĕk'tôtŭr'bĭnāl) *n.* [Gk. *ektos*, outside ; L. *turbo*, whirl.] A division of the ethmoturbinal.

**ectozoon** (ĕk'tôzō'ôn) *n.* [Gk. *ektos*, outside ; *zoon*, animal.] An external animal parasite ; epizoon.

**ecumene** (ĕk'ŭmĕn'ē) *n.* [Gk. *oikoumene*, habitable world.] Any inhabited region ; the biosphere.

**edaphic** (ĕdăf'ĭk) *a.* [Gk. *edaphos*, ground.] *Pert.* or influenced by conditions of soil or substratum.

**edaphology** (ĕdăfŏl'ojĭ) *n.* [Gk. *edaphos*, ground ; *logos*, discourse.] Soil science ; particularly the study of the influence of soil on living organisms ; *cf.* pedology.

**edaphon** (ĕd'ăfŏn) *n.* [Gk. *edaphos*, ground.] The organisms living within the soil ; soil flora and fauna.

**edentate** (ĕdĕn'tăt) *a.* [L. *ex*, without ; *dens*, tooth.] Without teeth or tooth-like projections.

**edestin** (ĕdĕs'tĭn) *n.* [Gk. *edestos*, eatable.] A plant globulin, main protein of sunflower and certain other seeds.

**edriophthalmic** (ĕd'riŏfthăl'mĭk) *a.* [Gk. *edra*, seat ; *ophthalmos*, eye.] Having sessile eyes ; *appl.* certain Crustacea.

**effector** (ĕfĕk'tŏr) *n.* [L. *efficere*, to carry out.] An organ which reacts to stimulus by producing work or substance, as muscle, electric and luminous organs, glands ; a motor end-organ in muscle.

**effferent** (ĕf'ĕrĕnt) *a.* [L. *ex*, out ; *ferre*, to carry.] Conveying from, *appl.* vessels, lymphatics, etc. ; carrying outwards, *appl.* impulses carried outwards by motor nerves.

**efflorescence** (ĕflŏrĕs'ĕns) *n.* [L. *efflorescere*, to blossom.] Blossoming ; time of flowering ; bloom.

**effoliation** (ĕffŏliă'shŭn) *n.* [L. *ex*, out of ; *folium*, leaf.] Shedding or removal of leaves.

**effuse** (ĕfŭs') *a.* [L. *effusus*, poured out.] Spreading loosely, *appl.* inflorescence ; spreading thinly, *appl.* bacterial cultures.

**egest** (ĕjĕst') *v.* [L. *ex*, out ; *gerere*, to carry.] To throw out ; to void ; to excrete.

**egesta** (ĕjĕs'tă) *n. plu.* [L. *egestus*, discharged.] The sum-total of substances and fluids discharged from body.

**egg** (ĕg) *n.* [A.S. *æg*, Icel. *egg*.] The matured female germ-cell ; ovule.

**egg-albumin**,—the chief constituent of white of egg, a mixture of glucoproteins.

**egg-apparatus**,—the two synergids and ovum proper, near micropyle in embryo-sac of seed plants.

**egg-case**,—a protective covering for eggs.

**egg-cell**,—the ovum proper apart from any layer of cells derived from it or from other cells.

**egg-membrane**,—the layer of tough tissue lining an egg shell.

**egg-nucleus**,—the female pronucleus.

**egg-tooth**,—a small structure on tip of upper jaw, or of beak, by which the embryo breaks its shell.

**eiloid** (ĭ'lŏid) *a.* [Gk. *eilein*, to roll up ; *eidos*, form.] Shaped like a coil.

**ejaculate** (ĕjăk'ŭlăt) *n.* [L. *ejaculatus*, thrown out.] The emitted seminal fluid.

**ejaculatory** (ĕjăk'ŭlătŏrĭ) *a.* [L. *ejaculare*, to throw out.] Throwing out ; *appl.* certain ducts.

**ejaculatory sac**,—organ pumping ejaculate from vas deferens through ejaculatory duct to penis, in certain insects.

**elaborate** (ĕlăb'ŏrăt) *v.* [L. *elaborare*, to work out.] To change from a crude state to a state capable of assimilation ; to form complex organic substances from simple materials.

**elaebblast** (ĕlĕ'ŏblăst) *n.* [Gk. *elaion*, oil ; *blastos*, bud.] A mass of nutrient material at posterior end of body in certain tunicates.

**elaecocyte** (ĕlĕ'ŏsit) *n.* [Gk. *elaion*, oil ; *kytos*, hollow.] A cell containing fatty droplets, found in coelomic fluid of annelids.

**elaedochon** (ël'ëöd'okôn) *n.* [Gk. *elaiodochos*, oil-containing.] The preen-gland or oil-gland in birds.

**elaioplast** (ël'ïöpläst') *n.* [Gk. *elaion*, oil; *plastos*, moulded.] A plastid in a plant cell which forms or helps to form oil globules.

**elaiosome**,—elaioplast.

**elaiosphere** (ël'ïösfër) *n.* [Gk. *elaion*, oil; *sphaira*, globe.] An oil globule in a plant cell.

**elastic fibro-cartilage**,—consists of cartilage cells and a matrix pervaded by a network of yellow elastic fibres which branch and anastomose in all directions.

**elastica externa**,—external layer of notochordal sheath.

**elastica interna**,—the epitheliomorph layer of notochordal cells.

**elastin** (ëläs'tin) *n.* [Gk. *elaunein*, to draw.] The sclero-protein of which elastic fibres are composed.

**elater** (ël'ätër) *n.* [Gk. *elater*, driver.] One of cells with a spiral thickening which assist in dispersing spores from capsule in liverworts; one of spore appendages formed from epispore in horsetails.

**elaterophore** (ël'ätërför) *n.* [Gk. *elater*, driver; *pherein*, to bear.] Tissue bearing the elaters, in some liverworts.

**electosome** (ëlëk'tösöm) *n.* [Gk. *eklektikos*, chosen; *soma*, body.] A chondriosome regarded as a centre for elaborating and fixing chemical constituents of protoplasm.

**electric organ**,—modifications of muscles or groups of muscles which discharge electric energy, found in certain fishes.

**electroendosmotic layer**,—a hypothetical 'membrane' present between two neurons or between neuron and muscle cell.

**electrolemma** (ëlëk'trölëm'a) *n.* [Gk. *elektron*, amber; *lemma*, skin.] Membrane surrounding an electroplax.

**electrophoresis** (ëlëk'tröfö'rë'sis) *n.* [Gk. *elektron*, amber; *pherein*, to

bear.] Transport of substances, as of colloidal particles, resulting from differences in electrical potential.

**electropism**,—electrotropism, *q.v.*

**electroplax** (ëlëk'tröpläks) *n.* [Gk. *elektron*, amber; *plax*, plate.] One of the constituent plates of an electric organ.

**electrotaxis** (ëlëk'trötäk'sis) *n.* [Gk. *elektron*, amber; *taxis*, arrangement.] Orientation of movement within an electric field.

**electrotonic** (ëlëk'trötön'ik) *a.* [Gk. *elektron*, amber; *tonos*, tension.] *Pert.* a state of electric tension.

**electrotonus** (ëlëktröt'önüs, ëlëktrötön'üs) *n.* [Gk. *elektron*, amber; *tonos*, tension.] The modified condition of a nerve when subjected to a constant current of electricity.

**electrotropism** (ëlëktröt'röpizm) *n.* [Gk. *elektron*, amber; *trope*, turn.] Reaction of an organism to electric stimuli; plant curvature in an electric field.

**eleidin** (ëlë'idin) *n.* [Gk. *elaia*, olive.] Substance found as small granules or droplets in stratum granulosum of epidermis.

**eleo**,—see elaco-, elaio-.

**eleutherodactyl** (ëlü'thërodäk'til) *a.* [Gk. *eleutheros*, free; *daktylos*, finger.] Having hind toe free.

**eleutheropetalous** (ëlü'thëropët'älüs) *a.* [Gk. *eleutheros*, free; *petalon*, petal.] Having petals or components of whorl free or separate.

**eleutherophyllous** (ëlü'thërofïl'üs) *a.* [Gk. *eleutheros*, free; *phyllon*, leaf.] Having components of perianth whorls free.

**eleutherosepalous** (ëlü'thërosëp'älüs) *a.* [Gk. *eleutheros*, free; *F. sépale*, sepal.] Having sepals free or separate.

**elevator** (ël'ëvätör) *n.* [L. *elevare*, to lift up.] Any muscle which raises a part.

**eligulate** (ëlïg'ülät) *a.* [L. *ex*, out; *ligula*, little tongue.] Having no ligule; *appl.* certain club-mosses.

**elimination bodies**,—nucleic acid material expelled from each chromosome during meiosis, remaining in middle of spindle and disintegrating during telophase.

**elliptical** (ělp'tikāl) *a.* [Gk. *elleipsis*, a falling short.] Oval-shaped;

*appl.* leaves of about same breadth at equal distances from base and apex, which are slightly acute.

**eluvial** (ělū'vīāl) *a.* [L. *ex*, out; *luere*, to wash.] *Appl.* leached upper layers or A horizon of soil.

**elytriform** (ěl'triform) *a.* [Gk. *elytron*, sheath; L. *forma*, shape.] Shaped like an elytrum.

**elytroid** (ěl'troid) *a.* [Gk. *elytron*, sheath; *eidōs*, resemblance.] Resembling an elytrum.

**elytrum** (ěl'trūm) *n.* [Gk. *elytron*, sheath.] The anterior wing of certain insects, hard and case-like; one of scales or shield-like plates found on dorsal surface of some worms; also elytron.

**emarginate** (ēmār'jīnāt) *a.* [L. *ex*, out; *marginare*, to delimit.] Having a notch at apex; having a notched margin.

**embole** (ēm'bölē) *n.* [Gk. *embole*, a throwing in.] Invagination; also emboly.

**embolic** (ěmböl'ik) *a.* [Gk. *embole*, a throwing in.] Pushing or growing in.

**embolium** (ěmbō'līūm) *n.* [Gk. *embolos*, wedge.] Outer or costal part of wing, or basal part of hemelytron, in certain insects.

**embolomeros** (ēm'bōlōm'ērūs) *a.* [Gk. *embolos*, wedge; *meros*, part.] Having two vertebral rings in each segment, due to union of hypocentra with neural arch, and union of two pleurocentra below notochord.

**embolus** (ēm'bölūs) *n.* [Gk. *embolos*, wedge.] Apical division of the palpus in certain spiders; a clot blocking a blood-vessel.

**embryo** (ēm'brīō) *n.* [Gk. *embryon*, embryo.] A young organism in early stages of development before it becomes self-supporting.

**embryo cell**,—one of two cells formed from first division of fertil-

ised egg in certain plants, developing later into embryo, the other developing into suspensor.

**embryogenesis** (ēm'brīōjēn'ēsīs) *n.* [Gk. *embryon*, embryo; *genesis*, descent.] Origin of the embryo; embryogeny, *q.v.*

**embryogeny** (ěmbrīōj'ēnt) *n.* [Gk. *embryon*, embryo; *gennaein*, to produce.] The processes by which the embryo is formed; origin, cellular pattern, and functions of the embryo.

**embryology** (ěmbrīōl'ōjī) *n.* [Gk. *embryon*, embryo; *logos*, discourse.] That part of biology dealing with formation and development of the embryo.

**embryonal knot**,—inner cell mass of blastodermic vesicle.

**embryonic** (ěmbrīōn'ik) *a.* [Gk. *embryon*, embryo.] *Pert.* embryo.

**embryonomy** (ěmbrīōn'ōmī) *n.* [Gk. *embryon*, embryo; *nomos*, law.] The laws of embryonic development; classification of embryos. *a.* Embryonomic.

**embryophore** (ēm'brīōfōr) *n.* [Gk. *embryon*, embryo; *pherein*, to bear.] Ciliated mantle enclosing embryo in many tape-worms, and formed from superficial blastomeres of embryo.

**embryophyta** (ēm'brīōfī'tā) *n. plu.* [Gk. *embryo*, embryo; *phyton*, plant.] Plants having an enclosed embryo, as those with an archegonium, or bearing seeds.

**embryo-sac**,—the megaspore; female gametophyte in angiosperms.

**embryotectonics** (ēm'brīōtēktōn'iks) *n.* [Gk. *embryon*, embryo; *tektōn*, builder.] The structure or cellular pattern of the embryo.

**embryotega** (ēm'brīōt'ēgā) *n.* [Gk. *embryon*, embryo; *tegos*, roof.] Small hardened portion of testa which marks micropyle in some seeds and separates like a little lid at period of germination.

**embryotrophy** (ēm'brīōt'rōfī) *n.* [Gk. *embryon*, embryo; *trophe*, nourishment.] Nourishment of embryo, or means adapted therefor.



**emergence** (ēmēr'jēns) *n.* [L. *ex*, out; *mergere*, to dip.] An outgrowth from subepidermal tissue; an epidermal appendage.

**emersed** (ēmērs't) *a.* [L. *ex*, out; *mergere*, to dip.] Rising above surface of water; *appl.* leaves.

**eminence** (ēm'inēns) *n.* [L. *eminens*, eminent.] Ridge or projection on surface of bones; eminentia.

**emissary** (ēm'isāri) *a.* [L. *emittere*, to send out.] Coming out; name *appl.* veins passing through apertures in cranial wall and establishing connection between sinuses inside and veins outside.

**emmenine** (ēm'enīn) *n.* [Gk. *emmenos*, monthly.] A placental gonadotrophic hormone.

**empodium** (ēmpō'diūm) *n.* [Gk. *en*, in; *pous*, foot.] A small variable median structure between claws of feet in many insects.

**emulsin** (ēmūl'sin) *n.* [L. *emulgere*, to milk out.] A hydrolytic enzyme found in certain plants and some invertebrates.

**enamel** (ēnām'ēl) *n.* [O.F. *esmaillier*, to coat with enamel.] The hard material containing over 90 per cent. calcium and magnesium salts which forms a cap over dentine, or may form a complete coat to tooth or scale.

**enamel cells**,—cells which form enamel, collectively the enamel organ; adamantoblasts, ameloblasts.

**enantibiosis** (ēnān'tiōblō'sis) *n.* [Gk. *enantios*, opposite; *bios*, life.] Antagonistic symbiosis.

**enantioblastic** (ēnān'tiōblās'tik) *a.* [Gk. *enantios*, opposite; *blastos*, bud.] Formed at end of seed opposite placenta.

**enantiomorphic** (ēnān'tiōmōr'fik) *a.* [Gk. *enantios*, opposite; *morphe*, form.] Similar but contraposed, as mirror image, right and left hand; deviating from normal symmetry.

**enarthrosis** (ēn'arthrō'sis) *n.* [Gk. *en*, in; *arthron*, joint.] Ball-and-socket joint.

**enatus** (ēnā'shūn) *n.* [L. *enatus*, grown from.] A non-reproductive

accessory part emerging from surface of telome; outgrowth from a previously smooth surface.

**encephalisation** (ēnkēf'ālīzā'shūn, -sēf'-) *n.* [Gk. *engkephalos*, brain.] Brain formation by the forward-shifting and centralising tendency of co-ordinating neurones.

**encephalocoel** (ēnkēf'ālōsēl, -sēf'-) *n.* [Gk. *engkephalos*, brain; *koilos*, hollow.] Cavity within the brain; cerebral ventricle, the anterior dilatation of neurocoel.

**encephalomere** (ēnkēf'ālōmēr, -sēf'-) *n.* [Gk. *engkephalos*, brain; *meros*, part.] A brain segment.

**encephalon** (ēnkēf'ālōn, -sēf'-) *n.* [Gk. *engkephalos*, brain.] The brain.

**encephalospinal** (ēnkēf'ālōspī'nāl, -sēf'-) *a.* [Gk. *engkephalos*, brain; L. *spina*, spine.] *Pert.* brain and spinal cord.

**enchondral**,—enchondral, intra-cartilaginous, *q.v.*

**enchylema** (ēnkilē'mā) *n.* [Gk. *en*, in; *chylos*, juice.] The more fluid portion of a cell; cell sap.

**encretion** (ēnkrē'shūn) *n.* [Gk. *en*, within; *krinein*, L. *cernere*, to put apart.] Endocrine secretion; hormone.

**encyst** (ēnsist') *v.* [Gk. *en*, in; *kystis*, bladder.] Of a cell or small organism, to surround itself with an outer coat or capsule.

**encystation** (ēnsistā'shūn), **encystment** (ēnsist'mēnt) *n.* [Gk. *en*, in; *kystis*, bladder.] Formation of a firm, resistant envelope or capsule.

**endarch** (ēnd'ārk) *a.* [Gk. *endon*, within; *arche*, beginning.] With central protoxylem, or with several surrounding a central pith.

**endaspidéan** (ēnd'āspīd'ēān) *a.* [Gk. *endon*, within; *aspis*, shield.] With scutes extending on inner surface of tarsus.

**end-brain**,—telencephalon, *q.v.*

**end-bulbs**,—minute cylindrical or oval bodies, consisting of capsule containing a semi-fluid core in which axis cylinder terminates either in a bulbous extremity or in a coiled plexiform mass.

**end cell** —a cell incapable of further differentiation.

**endemic** (ĕndĕm'ik) *a.* [Gk. *endemos*, native.] Restricted to a certain region or part of a region.

**enderon** (ĕn'dĕrŏn) *n.* [Gk. *en*, in; *deros*, skin.] The inner or endodermal layer.

**enderonic** (ĕn'dĕrŏn'ik) *a.* [Gk. *en*, in; *deros*, skin.] Endodermal.

**endites** (ĕndĭts) *n. plu.* [Gk. *endon*, within.] Offshoots on mesial border of certain appendages of arthropods.

**endo**,—see also ento.

**endobasal** (ĕn'dŏbĕ'sĕl) *a.* [Gk. *endon*, within; *basis*, base.] *Appl.* body, the kinetic element of central intranuclear structure; *cf.* endosome.

**endoblast** (ĕn'dŏblĕst) *n.* [Gk. *endon*, within; *blastos*, bud.] Hypoblast; coeloblast and myoblast.

**endocardiac** (ĕn'dŏkĕr'dĭĕk) *a.* [Gk. *endon*, within; *kardia*, heart.] Situated within the heart; endocardial.

**endocardium** (ĕn'dŏkĕr'dĭŭm) *n.* [Gk. *endon*, within; *kardia*, heart.] The membrane which lines inner surface of heart.

**endocarp** (ĕn'dŏkĕrp) *n.* [Gk. *endon*, within; *karpos*, fruit.] The innermost layer of pericarp, usually hard, in drupaceous fruits.

**endocarpoid** (ĕn'dŏkĕr'pŏid) *a.* [Gk. *endon*, within; *karpos*, fruit; *eidos*, form.] Having the disc-like ascocarps embedded in the thallus.

**endochiton** (ĕndŏkĭ'tŏn) *n.* [Gk. *endon*, within; *chiton*, coat.] Innermost layer of oogonial wall, as in Fucales; endochite; other layers: exochiton, mesochiton.

**endochondral** (ĕn'dŏkŏn'drĕl) *a.* [Gk. *endon*, within; *chondros*, cartilage.] Beginning or forming inside the cartilage, *appl.* ossification; *cf.* perichondral.

**endochondrostosis** (ĕn'dŏkŏndrŏstŏ'sĭs) *n.* [Gk. *endon*, within; *chondros*, cartilage; *osteon*, bone.] Ossification in cartilage from within outwards.

**endochone** (ĕn'dŏkŏnĕ) *n.* [Gk. *endon*, within; *choane*, funnel.] Spacious sub-cortical crypt in sponge tissue, from which arise incurrent canals.

**endochorion** (ĕn'dŏkŏ'rĭŏn) *n.* [Gk. *endon*, within; *chorion*, chorion.] Inner lamina of chorion of insect eggs.

**endochrome plate**,—a band of yellowish chromatophores found in protoplasmic portion of certain diatoms.

**endochromidia** (ĕn'dŏkrŏmĭd'ĭĕ) *n. plu.* [Gk. *endon*, within; *chroma*, colour; *idion*, dim.] Metachromatic corpuscles, formed from colloidal solution of metachromatin.

**endochylous** (ĕn'dŏkĭ'lŭs) *a.* [Gk. *endon*, within; *chylos*, juice.] With water-cells within internal tissue.

**endocoelar** (ĕn'dŏsĕ'lĕr) *a.* [Gk. *endon*, within; *koilos*, hollow.] *Pert.* inner wall of coelom, or splanchnopleure.

**endocoelic** (ĕn'dŏsĕ'lik) *a.* [Gk. *endon*, within; *koilos*, hollow.] In sea-anemones, *appl.* radial area on disc covering space between two mesenteries of the same pair; *appl.* inner cycle or cycles of tentacles, *opp.* exocoelic.

**endocone** (ĕn'dŏkŏn) *n.* [Gk. *endon*, within; *konos*, cone.] A conical structure formed in certain cephalopod shells.

**endocranium** (ĕn'dŏkrĕ'nĭŭm) *n.* [Gk. *endon*, within; *kranion*, skull.] Process on inner surface of cranium of certain insects; neurocranium, *q.v.*

**endocrine** (ĕn'dŏkrĭn) *n.* [Gk. *endon*, within; *krinein*, to separate.] A ductless gland. *a. Appl.* or *pert.* organs of internal secretion. *Opp.* exocrine.

**endocrinology** (ĕn'dŏkrĭnŏl'ŏjĭ) *n.* [Gk. *endon*, within; *krinein*, to separate; *logos*, discourse.] Study of endocrine glands and secretions, and of hormonal substances and their effects.

**endocuticula** (ĕn'dōkūtīk'ulā) *n.* [Gk. *endon*, within; *L. dim.* of *cutis*, skin.] The elastic inner layer of insect cuticle; inner layer of integument in spiders.

**endocycle** (ĕn'dōsī'kl) *n.* [Gk. *endon*, within; *kyklos*, circle.] A layer of tissue separating internal phloem from endodermis.

**endocyclic** (ĕn'dōsī'kl) *a.* [Gk. *endon*, within; *kyklos*, circle.] With the mouth remaining in axis of coil of gut, *appl.* crinoids; having an apical system with double circle of plates surrounding anus, *appl.* echinoids; *pert.* endocycle.

**endocyst** (ĕn'dōsīst) *n.* [Gk. *endon*, within; *kystis*, bladder.] The soft body wall in a polyzoan zooid; the membranous inner lining of a protozoan cyst; *cf.* epicyst.

**endoderm** (ĕn'dōdĕrm) *n.* [Gk. *endon*, within; *derma*, skin.] The hypoblast; the epithelium of digestive and respiratory organs, and of glands appended to digestive tract.

**endoderm disc**,—posterior unpaired thickening on ventral surface of blastoderm of crayfish.

**endoderm lamella**,—a thin sheet of endoderm stretching between adjacent radial canals, and between circular canal and enteric cavity in certain Coelenterata.

**endodermis** (ĕn'dōdĕr'mīs) *n.* [Gk. *endon*, within; *derma*, skin.] Innermost layer of cortex in plants; layer surrounding pericycle.

**endoenzyme** (ĕn'dōĕn'zīm) *n.* [Gk. *endon*, within; *en*, in; *zyme*, leaven.] Any intracellular enzyme.

**endogamy** (ĕndōg'āmī) *n.* [Gk. *endon*, within; *gamos*, marriage.] Zygote formation within the cyst by reciprocal fusion of division products of daughter nuclei; self-pollination; inbreeding.

**endogastric** (ĕn'dōgās'trīk) *a.* [Gk. *endon*, within; *gaster*, belly.] Having curvature of body with enclosing shell towards ventral side; within the stomach.

**endogenous** (ĕndōj'ĕnūs) *a.* [Gk.

*endon*, within; *-genes*, producing.] Originating within the organism; endogenic, *opp.* exogenous; autogenic, *opp.* allogenic; developing from a deep-seated layer; *appl.* metabolism concerned with tissue waste and growth

**endogenous multiplication**,—spore formation, *q.v.*

**endogeny** (ĕndōj'ĕnī) *n.* [Gk. *endon*, within; *genos*, descent.] Development from a deep-seated layer.

**endognath** (ĕn'dōnāth') *n.* [Gk. *endon*, within; *gnathos*, jaw.] The inner branch of oral appendages of Crustacea.

**endognathion** (ĕn'dōnāth'īōn) *n.* [Gk. *endon*, within; *gnathos*, jaw.] Mesial segment of human premaxilla.

**endogonidium** (ĕn'dōgōnīd'īūm) *n.* [Gk. *endon*, within; *dim.* of *gone*, seed.] A gonidium formed in a gonidangium or receptacle; the colony-forming cells in such forms as Volvox.

**endolabium** (ĕn'dōlā'bīūm) *n.* [Gk. *endon*, within; *L. labium*, lip.] A membranous lobe in interior of mouth on middle parts of front of labium.

**endolaryngeal** (ĕn'dōlārīn'jĕāl) *a.* [Gk. *endon*, within; *larynx*, larynx.] *Pert.* or in the larynx.

**endolithic** (ĕn'dōlīth'īk) *a.* [Gk. *endon*, within; *lithos*, stone.] Burrowing or existing in stony substratum, as algal filaments.

**endolymph** (ĕn'dōlīm'f) *n.* [Gk. *endon*, within; *L. lymphā*, water.] The fluid in membranous labyrinth of ear.

**endolymphangial** (ĕn'dōlīm'fān'jīāl) *a.* [Gk. *endon*, within; *L. lymphā*, water; Gk. *anggeion*, vessel.] Situated in a lymphatic vessel.

**endolymphatic** (ĕn'dōlīm'fāt'īk) *a.* [Gk. *endon*, within; *L. lymphā*, water.] *Pert.* lymphatics, or to ear labyrinth ducts.

**endolysin** (ĕndōl'īsīn) *n.* [Gk. *endon*, within; *lysis*, loosing.] Intracellular substance of leucocytes which destroys engulfed bacteria.

**endomere** (ĕn'dōmēr) *n.* [Gk. *endon*, within; *meros*, part.] A hypoblast cell which gives rise to endoderm.

**endometrium** (ĕn'dōmē'trĭŭm) *n.* [Gk. *endon*, within; *metra*, womb.] Mucous membrane lining the uterus.

**endomitosis** (ĕn'dōmĭtō'sĭs) *n.* [Gk. *endon*, within; *mitos*, thread.] A form of mitosis occurring in endopolyploidy; multiplication of chromonemata or chromosomes without division of nucleus.

**endomixis** (ĕn'dōmĭk'sĭs) *n.* [Gk. *endon*, within; *mixis*, mixing.] A stage comparable with parthenogenesis in the reproductive rhythm of some protozoa; a type of nuclear reorganisation.

**endomysium** (ĕn'dōmĭz'ĭŭm) *n.* [Gk. *endon*, within; *mys*, muscle.] The connective tissue binding muscle fibres.

**endoneurium** (ĕn'dōnŭ'rĭŭm) *n.* [Gk. *endon*, within; *neuron*, nerve.] The delicate connective tissue holding together and supporting nerve fibres within funiculus.

**endoparasite** (ĕn'dōpār'āsĭt) *n.* [Gk. *endon*, within; *parasitos*, eating at another's table.] Any organism living parasitically within another.

**endoperidium** (ĕn'dōpērid'ĭŭm) *n.* [Gk. *endon*, within; *peridion*, little pouch.] Inner layer of peridium.

**endophragm** (ĕn'dōfrām) *n.* [Gk. *endon*, within; *phragma*, fence.] A septum formed by cephalic and thoracic apodemes in Crustacea.

**endophragmal** (ĕn'dōfrāg'māl) *a.* [Gk. *endon*, within; *phragma*, fence.] *Pert.* the endophragm.

**endophyllous** (ĕn'dōfil'ŭs) *a.* [Gk. *endon*, within; *phyllon*, leaf.] Sheathed by a leaf; living within a leaf, *appl.* parasites.

**endophyte** (ĕn'dōfit) *n.* [Gk. *endon*, within; *phyton*, plant.] A plant growing within another, either as parasite or otherwise.

**endophytic** (ĕn'dōfit'ĭk) *a.* [Gk. *endon*, within; *phyton*, plant.] Living in the tissues of plants.

**endoplasm** (ĕn'dōplāzm) *n.* [Gk. *endon*, within; *plasma*, mould.]

The endosarc or inner portion of protoplasm in a cell.

**endoplastule** (ĕn'dōplās'tŭl) *n.* [Gk. *endon*, within; *plastos*, moulded.] The micronucleus of certain Protista.

**endopleura** (ĕn'dōploō'rā) *n.* [Gk. *endon*, within; *pleura*, side.] The inner seed-coat or tegmen.

**endopleurite** (ĕn'dōploō'rĭt) *n.* [Gk. *endon*, within; *pleura*, side.] The epimeral portion of an apodeme; infolding between pleurites.

**endopodite** (ĕn'dōpōdĭt) *n.* [Gk. *endon*, within; *pous*, foot.] The inner or mesial branch of a biramous crustacean limb, or the only part of biramous limb remaining.

**endopolyploidy** (ĕn'dōpōl'ĭploīdĭ) *n.* [Gk. *endon*, within; *polys*, many; *aploos*, onefold; *eidōs*, form.] Polyploidy resulting from repeated doubling of chromosome number without normal mitosis.

**endoral** (ĕndō'rāl) *a.* [Gk. *endon*, within; *L. os*, mouth.] *Pert.* structures situated in the vestibule of certain protozoa.

**endorhachis** (ĕn'dōrā'kĭs) *n.* [Gk. *endon*, within; *rhachis*, backbone.] A layer of connective tissue lining canal of vertebral column and cavity of skull.

**endosarc** (ĕn'dōsārk) *n.* [Gk. *endon*, within; *sarx*, flesh.] Endoplasm, *q.v.*

**endoscopic** (ĕn'dōskōp'ĭk) *a.* [Gk. *endon*, within; *skopein*, to look.] With apex directed inwards toward base of archegonium, *appl.* embryo. *Opp.* exoscopic.

**endosiphuncle** (ĕn'dōsĭf'ŭngkl) *n.* [Gk. *endon*, within; *L. siphunculus*, little tube.] The tube leading from protoconch to siphuncle in certain Cephalopoda.

**endoskeleton** (ĕn'dōskēl'ētōn) *n.* [Gk. *endon*, within; *skeletos*, dried up.] Internal skeleton, *opp.* exoskeleton.

**endosmosis** (ĕn'dōsmō'sĭs) *n.* [Gk. *endon*, within; *osmos*, impulse.] The passage inwards through a permeable or semipermeable membrane, of a less concentrated solution. *Opp.* exosmosis.

**endosome** (ĕn'dōsōm) *n.* [Gk. *endon*, within; *soma*, body.] Chromatinic mass near centre of a vesicular nucleus; karyosome.

**endosperm** (ĕn'dōspĕrm) *n.* [Gk. *endon*, within; *sperma*, seed.] The nutritive tissue of certain seeds; nutritive residue of female prothallus surrounding an embryo.

**endospore** (ĕn'dōspōr), **endosporium** (ĕn'dōspō'rĭūm) *n.* [Gk. *endon*, within; *sporos*, seed.] Inner coat of sporocyst in some protozoa; an asexual spore; a sporangial spore; the inner coat of a spore wall.

**endosteal** (ĕndōs'tĕāl) *a.* [Gk. *endon*, within; *osteon*, bone.] *Pert.* endosteum.

**endosternite** (ĕn'dōstĕr'nĭt) *n.* [Gk. *endon*, within; L. *sternum*, sternum.] Internal skeletal plate for muscle attachment; median sternal apodeme; a free skeleton situated in prosoma between alimentary canal and nerve cord in arachnids.

**endosteum** (ĕndōs'tĕūm) *n.* [Gk. *endon*, within; *osteon*, bone.] The internal periosteum lining the cavities of bones.

**endostosis** (ĕn'dōstō'sĭs) *n.* [Gk. *endon*, within; *osteon*, bone.] Ossification which begins in cartilage.

**endostracum** (ĕndōs'trākūm) *n.* [Gk. *endon*, within; *ostrakon*, shell.] The inner layer of mollusc shell.

**endostyle** (ĕn'dōstĭl) *n.* [Gk. *endon*, within; *stylos*, pillar.] A band of thickened epithelium on oesophageal wall of a tornaria; two ventral longitudinal folds separated by a groove in pharynx of Tunicata; a longitudinal groove lined by ciliated epithelium on ventral wall of pharynx of Amphioxus; precursor of thyroid gland.

**endotergite** (ĕn'dōtĕr'jĭt, -gĭt) *n.* [Gk. *endon*, within; L. *tergum*, back.] An infolding from a tergite of insects, for muscle attachment; phragma.

**endotheca** (ĕn'dōthĕ'kā) *n.* [Gk. *endon*, within; *theke*, box.] The system of dissepiments in a coral calyx; the oval surface of Cystidea.

**endothecial** (ĕn'dōthĕ'sĭāl) *a.* [Gk. *endon*, within; *theke*, box.] *Pert.* endothecium; with asci in an ascocarp.

**endothecium** (ĕn'dōthĕ'sĭūm) *n.* [Gk. *endon*, within; *theke*, box.] The central region of an epibasal octant of oospore of liverworts and mosses; inner lining of an anther; inner dehiscing layer in ginkgo and angiosperms.

**endotheliocyte** (ĕn'dōthĕ'liōsĭt) *n.* [Gk. *endon*, within; *thele*, nipple; *kētos*, hollow.] A mononuclear phagocyte derived from endothelium; endothelial phagocyte or primitive wandering cell; a histiocyte; a macrophage.

**endothelium** (ĕn'dōthĕ'liūm) *n.* [Gk. *endon*, within; *thele*, nipple.] A squamous epithelium which lines serous cavities, the heart, blood and lymphatic vessels.

**entothorax** (ĕn'dōthō'rāks) *n.* [Gk. *endon*, within; *thorax*, chest.] The apodeme system in a crustacean thorax; *cf.* entothorax.

**entotoxin** (ĕn'dōtōk'sĭn) *n.* [Gk. *endon*, within; *toxikon*, poison.] A toxin within bacterial protoplasm; *opp.* exotoxin.

**endotrachea** (ĕn'dōtrākĕ'ā) *n.* [Gk. *endon*, within; L. *trachea*, wind-pipe.] The innermost, chitinous coat of tracheal tubes of insects.

**endotrophic** (ĕn'dōtrōf'ĭk) *a.* [Gk. *endon*, within; *trophe*, nourishment.] *Appl.* space within peritrophic membrane of insects; finding nourishment from within; *appl.* fungi inhabiting root cortex of host. *Opp.* ectotrophic.

**endozoochore** (ĕn'dōzō'ōkōr) *n.* [Gk. *endon*, within; *zoon*, animal; *chora*, place.] Any spore, seed, or organism dispersed by being carried within an animal. *Opp.* epizoochore.

**end-plates**,—motor end-organs, the ramified expansions within the muscular fibre which form the ends of a motor nerve.

**end-sac**,—the sac-like vestigial portion of coelom in excretory glands of certain Crustacea.

**endysis** (ĕn'disĭs) *n.* [Gk. *endysis*, putting on.] The development of a new coat; *cf.* ecdysis.

**energesĭs** (ĕn'ĕrjĕ'sis) *n.* [Gk. *energein*, to be active.] The process by which energy is liberated through katabolic action.

**energĭd** (ĕn'ĕrĭd) *n.* [Gk. *energōs*, working; *idion*, *dim.*] Any living uninucleated protoplasmic unit with or without a cell wall.

**enervose** (ĕnĕr'vōs) *a.* [L. *ex*, without; *nervus*, sinew.] Having no veins, *appl.* certain leaves.

**engram** (ĕn'grām) *n.* [Gk. *en*, in; *graphein*, to write.] A character impression in the mnemonic theory of heredity; a latent memory image.

**engraved** (ĕngrāv'd) *a.* (F. *en*, in; A.S. *grafan*, to dig.) With irregular linear grooves on the surface.

**ensiform** (ĕn'sĭfōrm) *a.* [L. *ensis*, sword; *forma*, shape.] Sword-shaped; xiphoid.

**entad** (ĕn'tād) *adv.* [Gk. *entos*, within; L. *ad*, towards.] Towards the interior; inwards; internally. *Opp.* ectad.

**ental** (ĕn'tāl) *a.* [Gk. *entos*, within.] Inner; internal. *Opp.* ectal.

**entelechy** (ĕntĕl'ĕkĭ) *n.* [Gk. *en*, in; *telos*, end; *echein*, to hold.] Vital principle or influence guiding living organisms in right direction.

**entepicondylar** (ĕnt'ĕpĭkōn'dilār) *a.* [Gk. *entos*, within; *epi*, upon; *kondylos*, knob.] *Pert.* lower or condylar end of humerus; *appl.* ulnar foramen.

**enteral** (ĕn'tĕrāl) *a.* [Gk. *enteron*, gut.] Within intestine; also *appl.* the parasympathetic portion of the autonomic nervous system.

**enteric** (ĕntĕr'ĭk) *a.* [Gk. *enteron*, gut.] *Pert.* alimentary canal.

**enteroblast** (ĕn'tĕrōblāst) *n.* [Gk. *enteron*, gut; *blastos*, bud.] The hypoblast after formation of the mesoblast.

**enterocoel** (ĕn'tĕrōsĕl') *n.* [Gk. *enteron*, gut; *koilos*, hollow.] A coelom arising as a pouch-like outgrowth of archenteric cavity, or as a series of such outgrowths.

**enterocrinin** (ĕn'tĕrōkrĭ'nĭn) *n.* [Gk. *enteron*, gut; *krinein*, to separate.] A hormone of small intestine, which stimulates secretion of intestinal juice.

**enteroderm** (ĕn'tĕrōdĕrm) *n.* [Gk. *enteron*, gut; *derma*, skin.] Enteroblast.

**enterogastrone** (ĕn'tĕrōgās'trōn) *n.* [Gk. *enteron*, gut; *gaster*, stomach.] A duodenal hormone which inhibits secretion and motility of stomach.

**enterokinase** (ĕn'tĕrōkĭnās') *n.* [Gk. *enteron*, gut; *kinein*, to move.] Incomplete enzyme of intestinal juice which converts trypsinogen into trypsin.

**enteron** (ĕn'tĕrōn) *n.* [Gk. *enteron*, gut.] The alimentary tract.

**enteronephric** (ĕn'tĕrōnĕf'ĭrĭk) *a.* [Gk. *enteron*, gut; *nephros*, kidney.] With nephridia opening into gut; *opp.* exonephric, *appl.* Oligochaeta.

**enteroproct** (ĕn'tĕrōprōkt) *n.* [Gk. *enteron*, gut; *proktos*, anus.] The opening from endodermal gut into proctodaeum.

**enterostome** (ĕn'tĕrōstōm) *n.* [Gk. *enteron*, gut; *stoma*, mouth.] The aboral opening of the actinopharynx, leading to coelenteron; the posterior opening of stomodaeum into endodermal gut.

**enterosympathetic** (ĕn'tĕrōsĭmpāth-ĕt'ĭk) *a.* [Gk. *enteron*, gut; *syn*, with; *pathos*, feeling.] *Appl.* that part of the nervous system supplying the intestine.

**enterozoon** (ĕn'tĕrōzō'ōn) *n.* [Gk. *enteron*, gut; *zoon*, animal.] Any animal parasite inhabiting intestines.

**entire** (ĕntĭr') *a.* [M.E. *enter*, untouched.] Unimpaired; with continuous margin, *appl.* leaves, bacterial colony.

**ento**,—*see also* endo-.

**entobranchiate** (ĕn'tōbrāng'kiāt) *a.* [Gk. *entos*, within; *branchia*, gills.] Having internal gills.

**entobronchus** (ĕn'tōbrōng'kūs) *n.* [Gk. *entos*, within; *brongchos*, windpipe.] The dorsal secondary branch of bronchus in birds; entobronchium.

**entochondrite** (ĕn'tôkôn'drit) *n.* [Gk. *entos*, within; *chondros*, cartilage.] Plastron or endosternum of *Limulus*.

**entochondrostosis** (ĕn'tôkôndrôstô'sis) *n.* [Gk. *entos*, within; *chondros*, cartilage; *osteon*, bone.] Ossification from within outwards.

**entocodon** (ĕn'tôkôd'ôn) *n.* [Gk. *entos*, within; *kodon*, bell.] The lens-shaped mass of cells, in development of medusoid, which sinks below level of superficial ectoderm, and ultimately develops a cavity.

**entocoel** (ĕn'tôsêl) *n.* [Gk. *entos*, within; *koilos*, hollow.] The space enclosed by a pair of mesenteries in Anthozoa.

**entocondyle** (ĕn'tôkôn'dîl) *n.* [Gk. *entos*, within; *kondylos*, knob.] Condyle on mesial surface of a bone.

**entocoid** (ĕn'tôkô'id) *n.* [Gk. *entos*, within; *konos*, cone.] The postero-internal cusp of a lower molar.

**entocuneiform** (ĕn'tôkûnē'îfôrm) *n.* [Gk. *entos*, within; *kuneos*, wedge; L. *forma*, shape.] The most internal of distal tarsal bones.

**entocyemate** (ĕn'tôsîē'māt) *a.* [Gk. *entos*, within; *kyema*, embryo.] With embryos having amnion and allantois.

**entoderm(al)**,—endoderm(al), *q.v.*

**entogastric** (ĕn'tôgâs'trik) *a.* [Gk. *entos*, within; *gaster*, belly.] *Pert.* interior of stomach; *appl.* gastric budding in medusae.

**entoglossal** (ĕn'tôglôs'âl) *a.* [Gk. *entos*, within; *glossa*, tongue.] Lying in substance of tongue.

**entoglossum** (ĕn'tôglôs'ûm) *n.* [Gk. *entos*, within; *glossa*, tongue.] Extension of basihyal into tongue in some fishes; also glossohyal.

**entomogenous** (ĕn'tômôj'ĕnûs) *a.* [Gk. *entomon*, insect; *genos*, birth.] Growing on insects, as certain fungi.

**entomology** (ĕn'tômôl'ôjî) *n.* [Gk. *entomon*, insect; *logos*, discourse.] That part of zoology which deals with insects.

**entomophagous** (ĕn'tômôf'âgûs) *a.*

[Gk. *entomon*, insect; *phagein*, to eat.] Insect-eating; insectivorous.

**entomophilous** (ĕn'tômôf'ilûs) *a.*

[Gk. *entomon*, insect; *philein*, to love.] Pollinated by agency of insects.

**entoneural** (ĕn'tônû'ral) *a.* [Gk. *entos*, within; *neuron*, nerve.] *Appl.* system of aboral ring and genital nerves in echinoderms.

**entophyte**,—endophyte, *q.v.*

**entopic** (ĕntôp'ik) *a.* [Gk. *en*, in; *topos*, place.] In normal position, *opp.* ectopic.

**entoplasm**,—endoplasm, *q.v.*

**entoplastron** (ĕn'tôplâs'trôn) *n.* [Gk. *entos*, within; F. *plastron*, breast-plate.] The anterior median plate in chelonian plastra, often called episternum, probably homologous with interclavicle of other reptiles.

**entopterygoid** (ĕn'tôptĕr'igoid) *n.* [Gk. *entos*, within; *pteryx*, wing; *eidos*, form.] A dorsal membrane bone behind the palatine in some fishes; *cf.* ectopterygoid.

**entosphere** (ĕn'tôsfer) *n.* [Gk. *entos*, within; *sphaira*, globe.] The inner portion of attraction sphere.

**entosternite**,—endosternite, *q.v.*

**entosternum** (ĕntôstĕr'nûm) *n.* [Gk. *entos*, within; L. *sternum*, breast-bone.] Entoplastron, *q.v.*; an internal process of sternum of numerous arthropods.

**entothorax** (ĕn'tôthô'râks) *n.* [Gk. *entos*, within; *thorax*, chest.] An insect apophysis or sternite.

**entoturbinals** (ĕn'tôtŭr'bînâlz) *n. plu.* [Gk. *entos*, within; L. *turbo*, whorl.] A division of ethmoturbinals.

**entotympanic** (ĕn'tôtîmpân'ik) *n.* [Gk. *entos*, within; *tympanon*, drum.] A separate tympanic element in some genera; also metatympanic.

**entovarial** (ĕnt'ôvâ'riâl) *a.* [Gk. *entos*, within; L. *ovum*, egg.] *Pert.* canal formed in ovaries of some fishes by insinking and closure of a groove formed by covering epithelium.

**entozoa** (ĕn'tôzô'â) *n. plu.* [Gk. *entos*, within; *zoon*, animal.] Internal animal parasites.

**entozoic** (ĕn'tōzō'īk) *a.* [Gk. *entos*, within ; *zoe*, subsistence.] Living within the body or substance of another animal or plant ; *pert.* entozoa.

**entrochite** (ĕn'trōkīt) *n.* [Gk. *en*, in ; *trochos*, wheel.] The joint of fossil stem of a stalked crinoid.

**enucleate** (ĕnū'klēāt) *v.* [L. *e*, out of ; *nucleus*, kernel.] To deprive of a nucleus, as in microdissection of cells. *a.* Lacking a nucleus.

**envelope** (ĕn'velōp) *n.* [F. *enveloppe*, covering.] An outer covering of an egg ; any surrounding structure, *e.g.* floral envelope.

**environment** (ĕnvī'rōnmĕnt) *n.* [F. *environ*, about.] The sum-total of external influences acting on an organism or on part of an organism.

**enzootic** (ĕn'zōōt'īk) *a.* [Gk. *en*, in ; *zoon*, animal.] Afflicting animals ; *appl.* disease restricted to a locality.

**enzyme** (ĕn'zīm) *n.* [Gk. *en*, in, *zyme*, leaven.] A catalyst produced by living organisms and acting on one or more specific substrates ; a ferment ; *cf.* apo-enzyme, co-enzyme.

**Eocene** (ĕ'ōsĕn) *n.* [Gk. *eos*, dawn ; *kainos*, recent.] Early epoch of the Tertiary period, between Palaeocene and Oligocene.

**Eogaea** (ĕ'ōjĕ'ā) *n.* [Gk. *eos*, dawn ; *gaia*, land.] A zoogeographical division including Africa, South America, and Australasia ; *cf.* Caenogaea.

**eosinophil** (ĕ'ōsĭn'ōfĭl) *a.* [Gk. *eos*, dawn ; *philein*, to love.] *Appl.* cells which readily stain red with eosin ; oxyphil.

**Eozoic** (ĕ'ōzō'īk) *a.* [Gk. *eos*, dawn ; *zoe*, life.] *Appl.* Archaean or Pre-Cambrian period.

**epacme** (ĕpāk'mĕ) *n.* [Gk. *epi*, upon ; *akme*, prime.] The stage in phylogeny of a group just previous to its highest point of development.

**epalpate** (ĕpāl'pāt) *a.* [L. *ex*, without ; *palpus*, palp.] Not furnished with palpi.

**epanthous** (ĕpān'thūs) *a.* [Gk. *epi*, upon ; *anthos*, flower.] Living on flowers ; *appl.* certain fungi.

**epapillate** (ĕpāp'ĭlāt) *a.* [L. *ex*, without ; *papilla*, nipple.] Not having papillae.

**epapophysis** (ĕp'āpōf'ĭsĭs) *n.* [Gk. *epi*, upon ; *apophysis*, offshoot.] A median process arising from centre of vertebral neural arch.

**eparterial** (ĕp'ārtē'riāl) *a.* [Gk. *epi*, upon ; L. *arteria*, artery.] Situated above an artery ; *appl.* branch of right bronchus.

**epaulettes** (ĕp'ōlĕts) *n. plu.* [F. *épaule*, shoulder.] Branched or knobbed processes projecting from outer side of oral arms of many Scyphozoa ; crescentic ridges of cilia in echinopluteus.

**epaxial** (ĕpāk'sĭāl) *a.* [Gk. *epi*, upon ; L. *axis*, axle.] Above the axis ; dorsal ; usually *appl.* axis formed by vertebral column.

**epedaphic** (ĕp'ĕdāf'īk) *a.* [Gk. *epi*, upon ; *edaphos*, soil.] *Pert.*, or depending upon, climatic conditions.

**epencephalon** (ĕp'ĕnkĕf'ālōn, -sĕf-) *n.* [Gk. *epi*, upon ; *engkephalos*, brain.] The cerebellum.

**ependyma** (ĕpĕn'dīmā) *n.* [Gr. *ependyma*, outer garment.] The layer of cells lining cavities of brain and spinal cord ; ependyme.

**ependymal** (ĕpĕn'dīmāl) *a.* [Gk. *ependyma*, outer garment.] *Pert.* ependyma.

**ephapse** (ĕfāps') *n.* [Gk. *ephaptein*, to reach.] Region of contiguity between two axons lying side by side.

**ephaptic** (ĕfāp'tĭk) *a.* [Gk. *ephaptein*, to reach.] *Pert.* an ephapse ; *appl.* delay, the interval between stimulation of one (pre-ephaptic) axon and response of an apposed other (post-ephaptic) axon.

**epharmonic** (ĕf'ārmōn'īk) *a.* [Gk. *epi*, towards ; *harmos*, fitting.] *Pert.* epharmosis ; adaptive ; adapted to environment ; *appl.* convergence : morphological resemblance of different species inhabiting the same environment.



**epharmonsis** (ěf'armō'sis) *n.* [Gk. *epi*, towards; *harmos*, fitting.] The process of adaptation of organisms to new environmental conditions; attainment of the state of adaptation or epharmony.

**ephebic** (ěfē'bik) *a.* [Gk. *ephebos*, adult.] Adult; *pert.* stage in development or phylogeny between childhood and old-age stages.

**ephemeral** (ěfēm'ērāl) *n.* [Gk. *ephemeros*, lasting for a day.] A short-lived plant or animal species. *a.* Short-lived; taking place once only, *appl.* plant movements, as expanding of buds; completing life cycle within a brief time period.

**ephippial** (ěfip'īāl) *a.* [Gk. *ephippion*, saddle-cloth.] *Pert.* ehippium; *appl.* winter eggs, as of rotifers and daphnids.

**ephippium** (ěfip'īūm) *n.* [Gk. *ephippion*, saddle-cloth.] The pituitary fossa, or fossa hypophyseos of sphenoid; a thickened and indurated part of shell separating from the rest at ecdysis; a saddle-shaped modification of cuticle derived, later detached, from carapace and enclosing winter eggs, in Daphniidae.

**ephyra** (ěf'irā), **ephyrula** (ěfir'ulā) *n.* [Gk. *Ephyra*, nymph's name.] The small free-swimming jelly-fish stage of certain Scyphozoa, produced by strobilation of scyphistoma.

**epibasal** (ěp'ibā'sāl) *n.* [Gk. *epi*, upon; *basis*, base.] Upper segment of an oospore, ultimately giving rise to the shoot. *Opp.* hypobasal.

**epibenthos** (ěp'ibēnthōs) *n.* [Gk. *epi*, upon; *benthos*, depths.] Fauna and flora found between low-water mark and hundred fathom line.

**epibiotic** (ěp'ibiōt'ik) *a.* [Gk. *epibionai*, to survive.] Surviving, *appl.* endemic species that are relics of a former flora or fauna.

**epiblast** (ěp'iblāst) *n.* [Gk. *epi*, upon; *blastos*, bud.] The outer layer of the gastrula; ectoblast; a rudimentary second cotyledon, as in grasses.

**epiblema** (ěp'iblē'mā) *n.* [Gk. *epiblema*, cover.] The outermost layer of root-tissue; piliferous layer; epiblem.

**epibole** (ěpib'olē) *n.* [Gk. *epibole*, putting on.] Growth of one part over another in embryonic stages; also epiboly.

**epibolic** (ěp'ibōl'ik) *a.* [Gk. *epibole*, putting on.] Growing so as to cover over; *appl.* type of gastrulation.

**epibranchial** (ěp'ibrāng'kiāl) *a.* [Gk. *epi*, upon; *branchia*, gills.] *Pert.* second upper element in branchial arch; efferent branchial, *appl.* vessels.

**epicalyx** (ěp'ikāl'iks) *n.* [Gk. *epi*, upon; *kalyx*, cup.] Stipules, fused in pairs, producing an apparent outer or extra calyx; structure just below calyx produced by aggregation of bracts or bracteoles.

**epicanthus** (ěp'ikānthūs) *n.* [Gk. *epi*, upon; *kantnos*, corner of eye.] A prolongation of upper eyelid over inner angle of eye; Mongolian fold.

**epicardium** (ěp'ikār'diūm) *n.* [Gk. *epi*, upon; *kardia*, heart.] The visceral part of pericardium; tubular prolongation of branchial sac in many ascidians, which takes part in budding.

**epicarp** (ěp'ikārp) *n.* [Gk. *epi*, upon; *karpōs*, fruit.] Outer layer of the pericarp; exocarp.

**epicentral** (ěp'isēn'trāl) *a.* [Gk. *epi*, upon; *kentron*, centre.] Attached to or arising from vertebral centra; *appl.* intermuscular bones.

**epicerebral** (ěp'isēr'ēbrāl) *a.* [Gk. *epi*, upon; *L. cerebrum*, brain.] Situated above the brain.

**epichilium** (ěp'ikil'iūm) *n.* [Gk. *epi*, upon; *cheilos*, lip.] Terminal lobe of lower petal of orchid; epichile.

**epichordal** (ēp'ikôr'dāl) *a.* [Gk. *epi*, upon; *chorde*, cord.] Upon the notochord; *appl.* vertebrae in which ventral cartilaginous portions are almost completely suppressed; *appl.* upper lobe of caudal fin in fishes.

**epicoel** (ēp'isēl) *n.* [Gk. *epi*, upon; *koilos*, hollow.] Cavity of mid-brain in lower vertebrates; cerebellar cavity; a perivisceral cavity formed by invagination; also epicoele, epicoelia.

**epicondylar** (ēp'ikôn'dilār) *a.* [Gk. *epi*, upon; *kondylos*, knob.] *Pert.* epicondyle.

**epicondyle** (ēp'ikôn'dīl) *n.* [Gk. *epi*, upon; *kondylos*, knob.] A medial and a lateral protuberance at distal end of humerus and femur.

**epicone** (ēp'ikōn) *n.* [Gk. *epi*, upon; *konos*, cone.] The part anterior to girdle in Dinoflagellata, *opp.* hypocone.

**epicoracoid** (ēp'ikôr'ākoid) *a.* [Gk. *epi*, upon; *korax*, crow; *eidōs*, form.] *Pert.* an element, usually cartilaginous, at sternal end of coracoid in amphibians, reptiles, and monotremes.

**epicormic** (ēp'ikôr'mik) *a.* [Gk. *epi*, upon; *kormos*, trunk.] Growing from a dormant bud.

**epicotyl** (ēp'ikōt'īl) *n.* [Gk. *epi*, upon; *kotyle*, vase.] The axis of a plumule.

**epicotyledonary** (ēp'ikōtīlē'dōnārī) *a.* [Gk. *epi*, upon; *kotyle*, cup.] Above the cotyledons.

**epicoxite** (ēp'ikōk'sīt) *n.* [Gk. *epi*, upon; *L. coxa*, hip.] A small process at posterior end of toothed part of coxa of second to fifth pairs of appendages in Eurypterida.

**epicranial** (ēp'ikrā'nīāl) *a.* [Gk. *epi*, upon; *kranion*, skull.] *Pert.* cranium; *appl.* aponeurosis, muscles, bones, suture.

**epicranium** (ēp'ikrā'nīūm) *n.* [Gk. *epi*, upon; *kranion*, skull.] The region between and behind eyes in insect head; scalp; the structures covering the cranium.

**epicranius** (ēp'ikrā'nīūs) *n.* [Gk. *epi*, upon; *kranion*, skull.] The scalp

muscle, consisting of occipitalis and frontalis, connected by galea aponeurotica; occipitofrontalis.

**epicrine** (ēp'ikrīn) *a.* [Gk. *epi*, upon; *krinein*, to separate.] *Appl.* glands in which secretion is voided without disintegration of cells.

**epicritic** (ēp'ikrit'ik) *a.* [Gk. *epi*, upon; *krinein*, to judge.] *Appl.* stimuli and nerve systems concerned with delicate touch and other special sensations in skin.

**epictesis** (ēpit'ēsīs, ēpitē'sīs, -ktē-) *n.* [Gk. *epiktēsis*, further gain.] Capacity of a living cell to concentrate salt solutions diffusing into the cell.

**epicuticula** (ēp'ikū'tik'ulā) *n.* [Gk. *epi*, upon; *L. dim. of cutis*, skin.] Lamella or membrane external to exocuticle of insects.

**epicyst** (ēp'isist) *n.* [Gk. *epi*, upon; *kystis*, bladder.] The external resistant cyst of an encysted protozoan; *cf.* endocyst.

**epicyte** (ēp'isīt) *n.* [Gk. *epi*, upon; *kytos*, hollow.] The external layer of ectoplasm in certain protozoa.

**epidemes** (ēp'idēmz) *n. plu.* [Gk. *epi*, upon; *demas*, body.] In certain insects, small pieces closely related with articulation of wings.

**epidermis** (ēp'idēr'mīs) *n.* [Gk. *epi*, upon; *derma*, skin.] The outermost protective layer of stems, roots and leaves; scarf-skin or external layer of skin, a non-vascular stratified epithelium of ectodermic origin; single layer of ectoderm in invertebrates.

**epididymis** (ēp'idid'imīs) *n.* [Gk. *epi*, upon; *didymos*, testicle.] A mass at back of testicle composed chiefly of vasa efferentia; the coiled anterior end of Wolffian duct.

**epidural** (ēp'idū'rāl) *a.* [Gk. *epi*, upon; *L. dura*, hard.] *Pert.* dura mater; *appl.* space between dura mater and wall of vertebral canal.

**epigamic** (ēp'igām'ik) *a.* [Gk. *epi*, upon; *gamos*, marriage.] Tending to attract opposite sex, *e.g.* colour displayed in courtship.

**epigamous** (ĕpig'āmūs) *a.* [Gk. *ēpi*, upon; *gamos*, marriage.] Designating that stage in polychaetes in which immature forms become heteronereid, while sexual elements are ripening; epigamic. *q.v.*

**epigaster** (ĕp'īgās'tēr) *n.* [Gk. *ēpi*, upon; *gaster*, belly.] That part of embryonic intestine which later develops into colon.

**epigastric** (ĕp'īgās'trik) *a.* [Gk. *ēpi*, upon; *gaster*, belly.] *Pert.* anterior wall of abdomen; middle region of upper zone of artificial divisions of abdomen.

**epigastrium** (ĕp'īgās'triūm) *n.* [Gk. *ēpi*, upon; *gaster*, stomach.] The epigastric region; sternal portions of meso- and metathorax of insects.

**epigastroid**,—epipubis, *q.v.*

**epigeal** (ĕp'ijē'āl) *a.* [Gk. *ēpi*, upon; *ge*, earth.] Living near the ground, *appl.* insects; borne above ground, *appl.* cotyledons when they form first foliage leaves; also epigeal, epigeic, epigeous.

**epigenesis** (ĕp'ijēn'esīs) *n.* [Gk. *ēpi*, upon; *genesis*, descent.] Theory of generation, that embryo is an entirely new creation, not a mere unfolding of preformed structures.

**epigenetics** (ĕp'ijēnēt'iks) *n.* [Gk. *ēpi*, upon; *genesis*, descent.] Study of the mechanisms causing phenotypic effects to be produced by the genes of a genotype.

**epigenotype** (ĕp'ijēn'ōtīp) *n.* [Gk. *ēpi*, upon; *genos*, descent; *typos*, image.] The concatenation of processes linking genotype and phenotype.

**epigenous** (ĕpij'ēnūs) *a.* [Gk. *ēpi*, upon; *genos*, descent.] Developing or growing on a surface.

**epiglottis** (ĕp'iglōt'is) *n.* [Gk. *ēpi*, upon; *glotta*, tongue.] A thin lamella of fibro-cartilage between root of tongue and entrance to larynx; epistome in Polyzoa; epipharynx in Insecta.

**epignathous** (ĕpignā'thūs) *a.* [Gk. *ēpi*, upon; *gnathos*, jaw.] Having upper jaw longer than lower.

**epigone**,—epigonium.

**epigonial** (ĕpigō'niāl) *a.* [Gk. *ēpi*, upon; *gone*, seed.] *Appl.* sterile posterior portion of genital ridge.

**epigonium** (ĕpigō'nium) *n.* [Gk. *ēpi*, upon; *gone*, seed.] The young sporangial sac in liverworts.

**epigynal** (ĕpij'ināl) *a.* [Gk. *ēpi*, upon; *gyne*, woman.] *Pert.* epigynum.

**epigynous** (ĕpij'inūs) *a.* [Gk. *ēpi*, upon; *gyne*, woman.] Having the various whorls adnate to ovary, thus apparently inserted in ovary.

**epigynum** (ĕpij'inūm) *n.* [Gk. *ēpi*, upon; *gyne*, woman.] External female genitalia in Arachnida; also epigyne, epigynium.

**epigyny** (ĕpij'inī) *n.* [Gk. *ēpi*, upon; *gyne*, woman.] Condition of having whorls apparently inserted in ovary.

**epihyal** (ĕp'ihī'āl) *a.* [Gk. *ēpi*, upon; *hyoeides*, T-shaped.] *Pert.* upper portion of ventral part of hyoid arch. *n.* Upper element of ventral portion, a cartilage or bone in centre of stylohyoid ligament.

**epilabrum** (ĕpilā'brūm) *n.* [Gk. *ēpi*, upon; *L. labrum*, lip.] A process at side of labrum in Myriapoda.

**epilemmal** (ĕpilēm'āl) *a.* [Gk. *ēpi*, upon; *lemma*, skin.] *Appl.* sensory nerve endings on surface of sarcolemma.

**epilimnion** (ĕp'ilimnī'ōn, -lim'nyōn) *n.* [Gk. *ēpi*, upon; *limnaios*, stagnant; *limne*, marshy lake.] Upper water layer, above thermocline, in lakes. *Opp.* hypolimnion.

**epilithic** (ĕpilith'ik) *a.* [Gk. *ēpi*, upon; *lithos*, stone.] Attached on rocks; *appl.* algae.

**epimandibular** (ĕp'imāndib'ulār) *a.* [Gk. *ēpi*, upon; *L. mandibulum*, jaw.] *Pert.* a bone in lower jaw of vertebrates.

**epimeral** (ĕpimē'rāl) *a.* [Gk. *ēpi*, upon; *meros*, thigh.] *Pert.* epimeron.

**epimere** (ĕp'imēr) *n.* [Gk. *ēpi*, upon; *meros*, part.] The dorsal muscle-plate of mesothelial wall.

**epimerite** (ĕp'imērīt) *n.* [Gk. *ēpi*, upon; *meros*, part.] Deciduous portion of protomerite in certain Gregarinina.

**epimeron** (ēpīmē'rōn) *n.* [Gk. *epi*, upon; *meros*, thigh.] A portion of pleuron in insects which may be posterior or nearly as far forward as episternum; posterior pleurite of subcoxa; portion of arthropod segment between tergum and limb insertions.

**epimorpha** (ēp'īmôr'fā) *n. plu.* [Gk. *epi*, upon; *morphe*, form.] Larvae hatched with all appendages developed; *cf.* anamorpha.

**epimorphosis** (ēp'īmôr'fōsis) *n.* [Gk. *epi*, upon; *morphosis*, shaping.] That type of regeneration in which proliferation of new material precedes development of new part.

**epimysium** (ēp'imīz'iŭm) *n.* [Gk. *epi*, upon; *mys*, muscle.] The sheath of areolar tissue which invests the entire muscle; *cf.* perimysium.

**epinasty** (ēp'ināsti) *n.* [Gk. *epi*, upon; *nasios*, close-pressed.] The more rapid growth of upper surface of a dorso-ventral organ, *e.g.* a leaf, thus causing unrolling or downward curvature.

**epinephrine** (ēp'inēf'rēn) *n.* [Gk. *epi*, upon; *nephros*, kidney.] Adrenaline; adrenin.

**epinephros** (ēp'inēf'rōs) *n.* [Gk. *epi*, upon; *nephros*, kidney.] The suprarenal or adrenal body.

**epineural** (ēp'inū'rāl) *a.* [Gk. *epi*, upon; *neuron*, nerve.] Arising from vertebral neural arch; *pert.* canal external to radial nerve in certain echinoderms; *appl.* sinus between embryo and yolk, beginning of body cavity in insects.

**epineurium** (ēp'inū'rīŭm) *n.* [Gk. *epi*, upon; *neuron*, nerve.] The external sheath of a nerve cord.

**epinotum** (ēp'inōt'ŭm) *n.* [Gk. *epi*, upon; *noton*, back.] Propodeon, *q.v.*

**epiopticon** (ēp'īōp'tīkōn) *n.* [Gk. *epi*, upon; *opsis*, sight.] The middle zone of optic lobes of insects.

**epiotic** (ēp'īōt'īk) *a.* [Gk. *epi*, upon; *ous*, the ear.] *Pert.* upper element of bony capsule of ear; *appl.* centre of ossification of mastoid process.

**epiparasite** (ēp'ipār'āsīt) *n.* [Gk. *epi*, upon; *parasitos*, eating at another's table.] Ectoparasite, *q.v.*

**epipelagic** (ēp'ipēlāj'īk) *a.* [Gk. *epi*, upon; *pelagos*, sea.] *Pert.* deep-sea water between surface and bathypelagic zone.

**epiperidium**,—exoperidium, *q.v.*

**epipetalous** (ēp'ipētālūs) *a.* [Gk. *epi*, upon; *petalon*, petal.] Having stamens inserted on petals.

**epipharyngeal** (ēp'ifār'ījēāl) *a.* [Gk. *epi*, upon; *pharyngx*, throat.] *Pert.* upper or dorsal aspect of pharynx.

**epipharynx** (ēp'ifār'īngks) *n.* [Gk. *epi*, upon; *pharyngx*, throat.] A projection on roof of mouth cavity of certain insects; membranous lining of labrum and clypeus drawn out with labrum to form a piercing organ, as in Diptera; lingua.

**epiphloem** (ēp'iflō'ēm) *n.* [Gk. *epi*, upon; *phloios*, bark.] Outer bark.

**epiphragm** (ēp'ifrām) *n.* [Gk. *epi-phragma*, covering.] A layer of hardened mucous matter, or a calcareous plate, closing the opening of certain gastropod shells; membrane which closes the capsule in certain mosses; a closing membrane in sporophores of certain fungi.

**epiphyll** (ēp'ifil) *n.* [Gk. *epi*, upon; *phyllon*, leaf.] A plant which grows on leaves, *e.g.* various lichens.

**epiphyllous** (ēp'ifil'ūs) *a.* [Gk. *epi*, upon; *phyllon*, leaf.] Growing on leaves; united to perianth, *appl.* stamens.

**epiphysial** (ēp'ifiz'iāl) *a.* [Gk. *epi*, upon; *phyein*, to grow.] *Pert.* or similar to the epiphysis; epiphyseal.

**epiphysis** (ēp'ifīsīs) *n.* [Gk. *epi*, upon; *phyein*, to grow.] Any part or process of a bone which is formed from a separate centre of ossification and later fuses with the bone; pineal body; pineal and parapineal organs; stout bar firmly fused to alveolus of each jaw and articulating with rotulae in sea-urchins; certain processes on tibia of insects; caruncle near hilum of seed.

**epiphyte** (ēp'ifit) *n.* [Gk. *epi*, upon; *phyton*, plant.] Plant which lives on surface of other plants.

**epiphytic** (ēp'iffit'ik) *a.* [Gk. *epi*, upon; *phyton*, plant.] Living on, or attached to, surface of a plant, *opp.* endophytic; *pert.* or similar to an epiphyte.

**epiphytotic** (ēp'iftōt'ik) *a.* [Gk. *epi*, upon; *phyton*, plant.] *Pert.* disease epidemic in plants.

**epiplankton** (ēp'iplāng'ktōn) *n.* [Gk. *epi*, upon; *planktos*, wandering.] That portion of plankton from surface to one hundred fathoms.

**epiplasm** (ēp'iplāzm) *n.* [Gk. *epi*, upon; *plasma*, mould.] Cytoplasm of a brood mother-cell remaining unused in brood formation; cytoplasm of ascus remaining after spore formation.

**epiplastron** (ēp'iplās'trōn) *n.* [Gk. *epi*, upon; F. *plastron*, breast-plate.] One of anterior pair of bony plates in plastron of Chelonia.

**epipleura** (ēp'iploo'rā) *n.* [Gk. *epi*, upon; *pleura*, rib.] Epithecral part of cingulum in diatoms; one of rib-like structures in telcosts which are not preformed in cartilage; an uncinat process in birds; the turned down outer margin of elytra of certain beetles.

**epiploic** (ēpiplō'ik) *a.* [Gk. *epiploon*, caul of entrails.] *Pert.* omentum.

**epiploic foramen**,—opening between bursa omentalis and large sac of peritoneum; foramen of Winslow.

**epiploon** (ēpiplōōn) *n.* [Gk. *epiploon*, caul of entrails.] Great omentum; insect adipose tissue.

**epipodial** (ēp'ipō'diāl) *a.* [Gk. *epi*, upon; *pous*, foot.] *Pert.* epipodium.

**epipodite** (ēp'ipōdīt) *n.* [Gk. *epi*, upon; *pous*, foot.] A process arising from basal joint of crustacean limb and usually extending into gill chamber.

**epipodium** (ēp'ipō'diūm) *n.* [Gk. *epi*, upon; *pous*, foot.] The leaf-blade or lamina; embryonic leaf-lamina; ridge, fold, or lobe along edge of foot of Gastropoda; raised

ring on an ambulacral plate in Echinoidea.

**epiprecoracoid** (ēp'iprēkōr'ākoid) *n.* [Gk. *epi*, upon; L. *prae*, before; Gk. *korax*, crow; *eidos*, form.] A small cartilage at ventral end of precoracoid in pectoral girdle in some Chelonia.

**epiproct** (ēp'iprōkt) *n.* [Gk. *epi*, upon; *proktos*, anus.] A supra-anal plate representing tergum of tenth or eleventh segment in some insects.

**epipteric** (ēp'iptēr'ik) *a.* [Gk. *epi*, upon; *pteron*, wing.] *Pert.* or shaped like, or placed above wing; *appl.* a small skull bone between parietal and sphenoidal ala.

**epipterygoid** (ēp'itēr'igoid) *n.* [Gk. *epi*, upon; *pteryx*, wing.] A small bone extending nearly vertically downwards from prootic to pterygoid; also columella cranii.

**epipubic** (ēp'ipū'bik) *a.* [Gk. *epi*, upon; L. *pubes*, adult.] *Pert.* or borne upon pubis; *appl.* certain cartilages or bones principally in marsupials; *appl.* anterior median process of ischiopubic plate.

**epipubis** (ēp'ipū'bis) *n.* [Gk. *epi*, upon; L. *pubes*, adult.] Unpaired cartilage or bone borne anteriorly on pubis; also epigastroid.

**epirhizous** (ēp'irī'zūs) *a.* [Gk. *epi*, upon; *rhiza*, root.] Growing upon a root.

**epirrhyza** (ēp'irī'sā) *n. plu.* [Gk. *epirrhein*, to flow into.] Inhalant canals in sponges, *opp.* aporrhysa.

**episematic** (ēp'isēmāt'ik) *a.* [Gk. *epi*, upon; *sema*, sign.] Aiding in recognition; *appl.* coloration, markings.

**episeme** (ēp'isēm) *n.* [Gk. *epi*, upon; *sema*, sign.] A marking or colour aiding in recognition.

**episepalous** (ēp'isēp'ālūs) *a.* [Gk. *epi*, upon; F. *sepale*, sepal.] Adnate to sepals.

**episkeletal** (ēp'iskēl'ētāl) *a.* [Gk. *epi*, upon; *skeletos*, hard.] Outside the endoskeleton.

**episperm** (ēp'ispērm) *n.* [Gk. *epi*, upon; *sperma*, seed.] The outer coat of seed; spermoderm; testa.

**episporangium** (ēp'ispōrān'jūm) *n.* [Gk. *epi*, upon; *sporos*, seed; *angeion*, vessel.] An indusium.

**epispore** (ēp'ispōr) *n.* [Gk. *epi*, upon; *sporos*, seed.] The outer layer of a spore wall; perinium, *q.v.*

**epistasis** (ēpis'tāsīs) *n.* [Gk. *epi*, upon; *stasis*, standing.] Dominance of a gene over another, non-allelomorphic gene; epistasy, *q.v.*

**epistasy** (ēpis'tāsī) *n.* [Gk. *epi*, upon; *stasis*, standing.] Greater degree of modification manifested by one of two related types in phylogenesis; masking of one hereditary character by another; epistasis, *q.v.*

**epistatic** (ēp'istāt'ik) *a.* [Gk. *epi*-states, master.] *Appl.* the predominating of two characters whose genes are not allelomorphs; exhibiting or *pert.* the condition of epistasis; *cf.* hypostatic.

**episternalia** (ēp'istērnā'liā) *n. plu.* [Gk. *epi*, upon; *sternon*, breast-bone.] Two small elements preformed in cartilage frequently intervening in development between clavicles and sternum, and ultimately fusing with sternum.

**episternite** (ēp'istēr'nīt) *n.* [Gk. *epi*, upon; *sternon*, breast-bone.] One of portions of an ovipositor formed from side portions of a somite.

**episternum** (ēp'istēr'nūm) *n.* [Gk. *epi*, upon; *L. sternum*, breast-bone.] The interclavicle; also applied to an anterior cartilaginous element of sternum; a lateral division of an arthropod somite, above sternum and in front of epimeron; anterior pleurite of subcoxa.

**epistome** (ēp'istōm) *n.* [Gk. *epi*, upon; *stoma*, mouth.] A small lobe overhanging mouth in Polyzoa and containing a part of body cavity; the region between antenna and mouth in Crustacea; subchelicerical plate in certain ticks; that portion of insect head immediately behind labrum; portion of rostrum of certain Diptera; also epistoma.

**epistrophe** (ēpis'trōfi) *n.* [Gk. *epi*-strophe, moving about.] The position assumed by chloroplasts along outer and inner cell-walls when exposed to diffuse light.

**epistropheus** (ēp'istrō'fēūs) *n.* [Gk. *epistrophe*, turning.] The second cervical or axis vertebra.

**epithalamus** (ēp'ithāl'āmūs) *n.* [Gk. *epi*, upon; *thalamos*, chamber.] Part of thalamencephalon, comprising trigonum habenulae, pineal body, and posterior commissure.

**epithalline** (ēp'ithāl'in) *a.* [Gk. *epi*, upon; *thallos*, branch.] Growing upon the thallus.

**epithecā** (ēp'ithē'kā) *n.* [Gk. *epi*, upon; *theke*, cup.] An external layer surrounding lower part of theca in many corals; theca covering epicone in Dinoflagellata; older half of frustule in diatoms.

**epithecium** (ēp'ithē'siūm) *n.* [Gk. *epi*, upon; *theke*, cup.] The surface of spore-cases in lichens and fungi.

**epithelial** (ēp'ithē'liāl) *a.* [Gk. *epi*, upon; *thele*, nipple.] *Pert.* epithelium; epitheliomorph.

**epithelial bodies**,—the parathyroids.

**epitheliofibrillae** (ēpithē'liōfibril'ē) *n. plu.* [Gk. *epi*, upon; *thele*, nipple; *L. fibrilla*, small fibre.] Parallel or reticular fibrillae of columnar epithelium analogous to myofibrillae.

**epitheliomorph** (ēpithē'liōmōrf) *a.* [Gk. *epi*, upon; *thele*, nipple; *morphe*, form.] Resembling epithelium; epithelioid; *appl.* layer of cells, or elastica interna, which secretes notochordal sheath.

**epithelium** (ēp'ithē'liūm) *n.* [Gk. *epi*, upon; *thele*, nipple.] Any cellular tissue covering a free surface or lining a tube or cavity.

**epithem** (ēp'ithēm) *n.* [Gk. *epi*, upon; *tithenai*, to put.] A plant tissue of specialised cells and intercellular spaces forming a hydathode; the secretory layer in nectaries; an excrescence on the beak of birds; also epithema and epitheme.

**epitokous** (ēpít'ókūs) *a.* [Gk. *epi*, upon; *tokos*, birth.] Designating the heteronereid stage of certain polychaetes.

**epitrematic** (ēp'itrēmāt'ik) *a.* [Gk. *epi*, upon; *trema*, pore.] *Appl.* upper lateral bar of branchial basket of lamprey.

**epitrichial** (ēp'itrik'īāl) *a.* [Gk. *epi*, upon; *thrix*, hair.] *Pert.* or resembling the epitrichium.

**epitrichium** (ēp'itrik'īūm) *n.* [Gk. *epi*, upon; *thrix*, hair.] An outer layer of foetal epidermis of many mammals, usually shed before birth.

**epitrochlea** (ēp'itrōk'lēā) *n.* [Gk. *epi*, upon; *L. trochlea*, Gk. *trochilia*, pulley.] Inner condyle at distal end of humerus.

**epitympanic** (ēp'itimpān'ik) *a.* [Gk. *epi*, upon; *L. tympanum*, kettle-drum.] Situated above tympanum.

**epivalve** (ēp'ivālv) *n.* [Gk. *epi*, upon; *L. valva*, fold.] The apical part of envelope in certain Dinoflagellata; epicone.

**epixylous** (ēpīzī'lūs, ēpik'silūs) *a.* [Gk. *epi*, upon; *xylon*, wood.] Growing upon wood.

**epizoic** (ēp'izō'ik) *a.* [Gk. *epi*, upon; *zoon*, animal.] Living on or attached to the body of an animal.

**epizoochore** (ēp'izō'ōkōr) *n.* [Gk. *epi*, upon; *zoon*, animal; *chora*, place.] Any spore, seed, or organism dispersed by being carried upon the body of an animal. *Opp* endozoochore.

**epizoon** (ēp'izō'ōn) *n.* [Gk. *epi*, upon; *zoon*, animal.] An animal living on another; an external parasite; ectozoon.

**epizootic** (ēp'izōōt'ik) *a.* [Gk. *epi*, upon; *zoon*, animal.] Common among animals. *n.* Disease affecting a large number of animals simultaneously, corresponding to epidemic in man.

**epizygial** (ēpiz'igāl) *n.* [Gk. *epi*, upon; *zygon*, yoke.] The upper ossicle in a syzygial pair of branchials or columnars in crinoids.

**eponychium** (ēp'ōnik'īūm) *n.* [Gk. *epi*, upon; *onyx*, nail.] The thin cuticular fold which overlaps lunula of nail; dorsal portion of a neonychium.

**epoophoron** (ēp'ōōf'ōrōn) *n.* [Gk. *epi*, upon; *oon*, egg; *pherein*, to bear.] A rudimentary organ (homologous with epididymis), remains of Wolffian body of embryo, lying in mesosalpinx between ovary and uterine tube; organ of Rosenmüller.

**equal** (ē'kwāl) *a.* [*L. aequalis*, equal.] Having the portions of the lamina equally developed on the two sides of midrib; *appl.* leaves.

**equation division**, — homeotypic or second division in meiosis.

**equatorial furrow**, — division round equator of segmenting egg.

**equatorial plate**, — group of chromosomes lying at equator of spindle during mitosis; locus of new cell-wall after cell-division.

**equibiradiata** (ē'kwibirā'diāt) *a.* [*L. aequus*, equal; *bis*, twice; *radius*, ray.] With two equal rays.

**equicellular** (ē'kwisēl'ūlār) *a.* [*L. aequus*, equal; *cellula*, cell.] Composed of equal cells.

**equifacial** (ē'kwifā'shāl) *a.* [*L. aequus*, equal; *facies*, face.] Having equivalent surfaces or sides, as vertical leaves.

**equilateral** (ē'kwilāt'erāl) *a.* [*L. aequus*, equal; *latus*, side.] Having the sides equal; *appl.* shells symmetrical about a transverse line drawn through umbo.

**equilenin** (ēkwilē'nin) *n.* [*L. equus*, horse.] An oestrogenic hormone present in urine of the pregnant mare;  $C_{18}H_{18}O_2$ .

**equiline** (ēk'wilēn) *n.* [*L. equus*, horse.] An oestrogenic hormone, more physiologically active than equilenin, occurring in urine of the pregnant mare;  $C_{18}H_{20}O_2$ .

**equipotent** (ēkwip'ōtēt) *a.* [*L. aequus*, equal; *potens*, powerful.] Totipotent, *q.v.*

**equitant** (ēk'witānt) *a.* [*L. equitare*, to ride.] Overlapping saddlewise, as leaves in leaf-bud.

**equivalence** (ē'kwīvālv') *a.* [L. *aequus*, equal; *valva*, valve.] Having two halves of a shell alike in form and size.

**erect** (ērēkt') *a.* [L. *erigere*, to raise up.] Directed towards summit of ovary, *appl.* ovule; not decumbent.

**erectile** (ērēk'tīl) *a.* [L. *erigere*, to raise up.] Capable of being erected.

**erectile tissue**,—a tissue capable of being made rigid by distention of blood-vessels within it.

**erection** (ērēk'shūn) *n.* [L. *erigere*, to raise up.] The state of a part which has become swollen and distended through accumulation of blood in erectile tissue.

**erector** (ērēk'tōr) *n.* [L. *erigere*, to raise up.] A muscle which raises up an organ or part.

**ereidesm** (ērē'idēzm) *n.* [Gk. *ereidein*, to support; *desma*, bond.] An epithelial intracellular fibre.

**eremobitic** (ērēmō'bik) *a.* [Gk. *eremos*, solitude; *bios*, life.] Growing or living in isolation; having a solitary existence.

**eremochaetous** (ēr'ēmōkē'tūs) *a.* [Gk. *eremos*, lonely; *chaeta*, bristle.] Having no regularly arranged system of bristles; *appl.* flies.

**eremophyte** (ēr'ēmōfit') *n.* [Gk. *eremos*, solitude; *phyton*, plant.] A desert plant.

**erepsin** (ērēp'sīn) *n.* [L. *eripere*, to set free.] A proteolytic enzyme of intestinal juice and body tissues.

**ergaloid** (ēr'gāloid) *a.* [Gk. *ergon*, work; *eidos*, form.] Having the adults sexually capable though wingless.

**ergastic** (ērgās'tīk) *a.* [Gk. *ergastikos*, fit for working.] *Pert.* metaplasia; *appl.* lifeless cell-inclusions, as fat, starch, etc.

**ergastoplasm** (ērgās'tōplāzm) *n.* [Gk. *ergazesthai*, to work; *plasma*, mould.] Archoplasm; kinoplasm.

**ergastoplasmic** (ērgās'tōplāz'mīk) *a.* [Gk. *ergazesthai*, to work; *plasma*, mould.] *Appl.* fibrillae of gland cells which may induce production of secretory granules.

**ergatandromorph** (ērgātān'drōmōrf)

*n.* [Gk. *ergates*, worker; *aner*, male; *morphe*, form.] An ant or other social insect in which worker and male characters are blended.

**ergatandrous** (ērgātān'drūs) *a.* [Gk. *ergates*, worker; *aner*, man.] Having worker-like males.

**ergataner** (ērgātā'nēr) *n.* [Gk. *ergates*, worker; *aner*, male.] A male ant resembling a worker; an ergatoid or ergatomorphic male.

**ergate** (ēr'gāt) *n.* [Gk. *ergates*, worker.] A worker-ant; ergates.

**ergatogyne** (ērgātōjīn'ē) *n.* [Gk. *ergates*, worker; *gyne*, female.] A female ant resembling a worker; an ergatoid or ergatomorphic female.

**ergatogynous** (ērgātōjīnūs) *a.* [Gk. *ergates*, worker; *gyne*, woman.] Having worker-like females.

**ergatoid** (ērgā'toid) *a.* [Gk. *ergates*, worker; *eidos*, form.] Resembling a worker, *appl.* ants; ergatomorphic.

**ergones** (ēr'gōnz) *n. plu.* [Gk. *ergon*, work.] Organic substances of which small amounts suffice for activation or regulation of a physiological process, as enzymes, hormones, and vitamins; also ergines.

**ergonomy** (ēr'gōn'ōmī) *n.* [Gk. *ergon*, work; *nomos*, law.] The differentiation of functions; physiological differentiation associated with morphological specialisation.

**ergosterol**,—a sterol occurring in plants and animals, with photochemical reaction products leading to formation of its isomer vitamin D<sub>2</sub>; C<sub>28</sub>H<sub>44</sub>O.

**ergot** (ēr'gōt) *n.* [O.F. *argot*, spur.] A small bare patch found on limbs of horse-tribe, representing last remnant of naked palm of hand and sole of foot; condition of ovary of grasses produced by a fungus; rye smut; sclerotium of *Claviceps*, yielding several alkaloids, e.g. ergotoxine and ergometrine, which stimulate uterine muscle.

**erichthoidina** (ērīk'thoid'īnā) *n.* [Gk. *erichthein*, to break; *eidos*, form.] Larval stage of Stomatopoda comparable with zoaea.



**erichthus** (ërik'thūs) *n.* [Gk. *erechthein*, to break.] Larval stage of Stomatopoda comparable with pseudoscolecids.

**ericomous** (ëriök'ömūs) *a.* [Gk. *erion*, wool; *kome*, hair.] Having woolly hair; fleece-haired.

**eriophyllous** (ër'iöfil'ūs) *a.* [Gk. *erion*, wool; *phyllon*, leaf.] Having leaves with a cottony appearance.

**erose** (ërös') *a.* [L. *erodere*, to wear away.] Having margin irregularly notched; *appl.* leaf, bacterial colony.

**erosion** (ërö'zhūn) *n.* [L. *erodere*, to wear away.] Decay which usually starts at apex of many gastropod shells.

**eristrate** (ërös'trät) *a.* [L. *ex*, without; *rostrum*, beak.] Having no beak; *appl.* antlers.

**ersaeome** (ër'sēōm) *n.* [Gk. *erse*, young.] The free monogastric generation of Siphonophora.

**eruciform** (ëroo'sifōrm) *a.* [L. *eruca*, caterpillar; *forma*, shape.] Having the shape of, or resembling a caterpillar; *appl.* insect larvae; *appl.* spores of certain lichens.

**erumpent** (ërūm'pënt) *a.* [L. *erumpere*, to break out.] Breaking through suddenly; *appl.* fungal hyphae.

**erythrin** (ëriθ'rīn) *n.* [Gk. *erythros*, red.] A red colouring matter found in certain algae and lichens;  $C_{20}H_{22}O_{10}$ .

**erythrism** (ëriθ'rīzm) *n.* [Gk. *erythros*, red.] Abnormal presence, or excessive amount, of red colouring matter, as in petals, feathers, hair, eggs; *cf.* rufinism.

**erythroblasts** (ëriθ'röbläst) *n. plu.* [Gk. *erythros*, red; *blastos*, bud.] Nucleated cells, derived from mesoderm, which later contain haemoglobin and develop into red blood corpuscles.

**erythrocrurin** (ëriθ'rökroo'örīn) *n.* [Gk. *erythros*, red; L. *cruor*, blood.] Red iron-containing respiratory pigment in some invertebrates.

**erythrocyte** (ëriθ'rösīt) *n.* [Gk.

*erythros*, red; *kytos*, hollow.] A red blood corpuscle.

**erythrocyte-maturing factor**,—formed by action of pyloric gland secretion (intrinsic factor) on extrinsic factor in food, and stored in liver, and necessary for maturation of red blood cells in bone-marrow; symbol: EMF.

**erythrocytolysis** (ëriθ'rösītöl'isis) *n.* [Gk. *erythros*, red; *kytos*, cell; *lysis*, loosing.] Destruction of red blood corpuscles; haemolysis.

**erythron** (ëriθ'rōn) *n.* [Gk. *erythros*, red; *on*, being.] The red cells in bone marrow and circulating blood, collectively.

**erythrophilous** (ër'ithröf'ilūs) *a.* [Gk. *erythros*, red; *philein*, to love.] Having special affinity for red stains; *appl.* structures in a cell or to a type of cells.

**erythrophore** (ëriθ'röfōr) *n.* [Gk. *erythros*, red; *pherein*, to bear.] A reddish-purple pigment-bearing cell.

**erythrophyll** (ëriθ'röfil) *n.* [Gk. *erythros*, red; *phyllon*, leaf.] A red colouring matter of some leaves and of red algae.

**erythropoiesis** (ëriθ'röpoi'ēsis) *n.* [Gk. *erythros*, red; *poiesis*, making.] The production of red blood corpuscles.

**erythropsin** (ëriθröp'sīn) *n.* [Gk. *erythros*, red; *opsis*, sight.] Red colouring matter in insect eyes; rhodopsin. *qv.*

**erythrotin** (ëriθ'rötīn) *n.* [Gk. *erythros*, red.] Vitamin B<sub>12</sub>, extracted from liver, anti-pernicious anaemia factor, and growth factor for certain micro-organisms.

**erythrozyme** (ëriθ'rözīm) *n.* [Gk. *erythros*, red; *zyme*, leaven.] An enzyme capable of decomposing ruberythric acid, and acting upon glucosides.

**escape** (ëskāp') *n.* [M.E. *escapen*.] A plant originally cultivated, now found wild.

**escutcheon** (ësküch'ūn) *n.* [O.F. *escuchon*, shield.] Area on rump of many quadrupeds which is either

- variously coloured or has the hair specially arranged; mesoscutellum of certain insects; ligamental area of certain bivalves.
- esepate** (ēsēp'tāt) *a.* [L. *ex*, without; *septum*, enclosure.] Not supplied with septa.
- esophagus**,—oesophagus, *q.v.*
- esoteric** (ēsōtēr'ik) *a.* [Gk. *esoterikos*, arising within.] Arising within the organism.
- espathate** (ēspāth'āt) *a.* [L. *ex*, without; *spatha*, broad blade.] Having no spathe.
- esquamate** (ēskwā'māt) *a.* [L. *ex*, without; *squama*, scale.] Having no scale.
- essential oils**,—volatile oils, composed of various constituents and contained in plant organs, with characteristic odour.
- esth**,—see *aesth*.
- estipulate** (ēstīp'ulāt) *a.* [L. *ex*, without; *stipula*, stem.] Having no stipules.
- estr**,—see *oestr*.
- estuarine** (ēs'tūārīn) *a.* [L. *aestuarium*, estuary.] *Pert.* or found in an estuary; *appl.* organisms.
- etaerio** (ētē'rīō) *n.* [Gk. *etairia*, association.] A fruit composed of achenes or drupels carried on an enlarged thalamus, or of follicles; eterio.
- etheogenesis** (ē'thēōjēn'ēsīs) *n.* [Gk. *etheos*, youth; *genesis*, descent.] Parthenogenesis producing males; development of a male gamete without fertilisation.
- Ethiopian** (ē'thiō'piān) *a.* [Gk. *aithiops*, burned-face.] *Appl.* or *pert.* a zoogeographical region including Africa south of the Sahara and southern Arabia, and divisible into African and Malagasy sub-regions.
- ethmohyostylic** (ēth'mōhi'ōstīl'ik) *a.* [Gk. *ethmos*, sieve; *τ*; *stylos*, pillar.] With mandibular suspension from ethmoid region and hyoid bar.
- ethmoid** (ēth'moid) *a.* [Gk. *ethmos*, sieve; *eidōs*, shape.] *Pert.* bones which form a considerable part of walls of nasal cavity.
- ethmoidal** (ēthmoi'dāl) *a.* [Gk. *ethmos*, sieve; *eidōs*, shape.] *Pert.* ethmoid bones or region.
- ethmoidal notch**,—a quadrilateral space separating the two orbital parts of the frontal bone; incisura ethmoidalis.
- ethmolysian** (ēth'mōlis'īān) *a.* [Gk. *ethmos*, sieve; *lyein*, to loosen.] *Pert.* an apical system in which the madreporite extends backwards till it separates the two posterolateral genitals.
- ethmopalatine** (ēth'mōpāl'ātīn) *a.* [Gk. *ethmos*, sieve; L. *palatus*, palate.] *Pert.* ethmoid and palatine bones, or their region.
- ethmophract** (ēth'mōfrākt) *a.* [Gk. *ethmos*, sieve; *phrassein*, to fence in.] *Pert.* a simple, compact, apical system with pores occurring only in right anterior corner.
- ethmoturbinals** (ēth'mōtūr'bīnālz) *n. plu.* [Gk. *ethmos*, sieve; L. *turbo*, whorl.] Cartilages or bones in nasal cavity which are folded so as to increase olfactory area.
- ethmovomerine** (ēth'mōvō'mērīn) *a.* [Gk. *ethmos*, sieve; L. *vomer*, plough-share.] *Pert.* ethmoid and vomer regions; *appl.* the cartilage which forms nasal septum in early embryo.
- ethnography** (ēthnōg'rāfi) *n.* [Gk. *ethnos*, nation; *graphein*, to write.] The description of the races of mankind.
- ethnology** (ēthnōl'ōjī) *n.* [Gk. *ethnos*, nation; *logos*, discourse.] Science dealing with the different races of mankind, their distribution, relationship, and activities.
- ethology** (ēthōl'ōjī) *n.* [Gk. *ethos*, custom; *logos*, discourse.] Bionomics; study of habits in relation to habitat; study of behaviour.
- ethomerous** (ēthōm'ērūs) *a.* [Gk. *ethos*, custom; *meros*, part.] Having the normal number of parts or segments; with normal number of chromosomes.
- etiolation** (ē'tiōlā'shūn) *n.* [F. *étioier*, to blanch.] Blanched condition produced in plants reared in darkness, or by disease.

**etioline** (ē'tiōlin) *n.* [F. *étioler*, to blanch.] A yellowish pigment found in chloroplasts of plants grown in darkness; protochlorophyll.

**etiology**,—aetiology, *q.v.*

**euapogamy** (ū'āpōg'āmī) *n.* [Gk. *eu*, well; *apo*, away; *gamos*, marriage.] Diploid apogamy, haploid apogamy being meiotic euapogamy.

**euaster** (ūs'āstēr) *n.* [Gk. *eu*, good; *aster*, star.] An aster in which the rays meet at a common centre.

**eucarpic** (ū'kārpik) *a.* [Gk. *eu*, well; *karpōs*, fruit.] *Appl.* Phycomycetes having rhizoids, or haustoria. *Opp.* holocarpic.

**eucentric** (ūsēn'trik) *a.* [Gk. *eu*, well; *kentron*, centre.] Pericentric, *q.v.*

**eucephalous** (ūkēf'ālūs, -sēf-) *a.* [Gk. *eu*, good; *kephale*, head] With well-developed head; *appl.* certain insect larvae.

**euchromatic** (ū'krōmāt'ik) *a.* [Gk. *eu*, well; *chroma*, colour.] *Pert.* euchromatin; *appl.* chromosome regions which never become heteropycnotic. *Opp.* heterochromatic.

**euchromatin** (ūkrō'mātīn) *n.* [Gk. *eu*, well; *chroma*, colour.] Chromatin making up bulk of chromosome and including active genes.

**euchromosome** (ūkrō'mōsōm) *n.* [Gk. *eu*, well; *chroma*, colour; *soma*, body.] A typical chromosome, or autosome.

**eucoen** (ūsēn) *n.* [Gk. *eu*, well; *koinos*, common.] Those members of a biocoenosis which are unable to live in a different environment. *Opp.* tychocoen.

**eucone** (ūkōn) *a.* [Gk. *eu*, good; *konos*, cone.] Having crystalline cones fully developed in single elements of compound eye.

**eudipleural** (ū'dīploō'rāl) *a.* [Gk. *eu*, good; *dis*, double; *pleuron*, side.] Symmetrical about a median plane; bilaterally symmetrical.

**eudoxome** (ū'dōksōm) *n.* [Gk. *eu-doxos*, glorious.] Monogastric free-swimming stage of a siphonophore without nectocalyx.

**eugamic** (ūgām'ik) *a.* [Gk. *eu*, well; *gamos*, marriage.] *Appl.* mature period, *opp.* agamic or youthful, and aged or senescent.

**eugenic** (ūjēn'ik) *a.* [Gk. *eu*, well; *genos*, birth.] *Pert.* or tending towards racial improvement.

**eugenics** (ūjēn'iks) *n.* [Gk. *eu*, well; *genos*, birth.] The science dealing with the factors which tend to improve or impair stock.

**euglenoid** (ūglē'noid) *a.* [Gk. *eu*, well; *glene*, eyeball, puppet; *eidōs*, form.] *Pert.* or like Euglena; *appl.* characteristic movement of Euglena.

**euhaline** (ūhāl'īn) *a.* [Gk. *eu*, well; *halinos*, saline.] Living only in saline inland waters; *cf.* euryhaline.

**eumelanin** (ū'mēl'ānīn) *n.* [Gk. *eu*, well; *melas*, black.] Black melanin; *cf.* phaeomelanin.

**eumerism** (ū'merizm) *n.* [Gk. *eu*, well; *meros*, part.] An aggregation of like parts.

**eumeristem** (ū'mēr'īstēm) *n.* [Gk. *eu*, well; *meristos*, divided.] Meristem composed of isodiametric thin-walled cells.

**eumerogenesis** (ū'mēr'ōjēn'ēsīs) *n.* [Gk. *eu*, well; *meros*, part; *genesis*, descent.] Segmentation in which the units are similar at least for a certain time.

**eumitosis** (ūmltō'sis) *n.* [Gk. *eu*, well; *mitos*, thread.] Typical mitosis.

**eumitotic** (ūmltōt'ik) *a.* [Gk. *eu*, well; *mitos*, thread.] Anaschistic, *q.v.*; *pert.* eumitosis.

**euphotic** (ūfō'tik) *a.* [Gk. *eu*, well; *phos*, light.] Well illuminated, *appl.* zone, surface waters to depth of about 80 metres; upper layer of photic zone; *cf.* dysphotic.

**euphotometric** (ū'fōtōmēt'rik) *a.* [Gk. *eu*, well; *phos*, light; *metron*, measure.] *Appl.* leaves oriented to receive maximum diffuse light; *cf.* panphotometric.

**euplastic** (ūplās'tik) *a.* [Gk. *eu*, well; *plastos*, moulded.] Readily organised, easily forming a tissue.

**euploid** (ū'ploid) *a.* [Gk. *eu*, well; *haploos*, onefold; *eidōs*, form.] Polyploid when total chromosome number is an exact multiple of the haploid number. *Opp.* aneuploid.

**eupotamic** (ūpōt'āmīk) *a.* [Gk. *eu*, well; *potamos*, river.] Thriving both in streams and in their backwaters; *appl.* potamoplankton.

**eupyrene** (ū'pīrēn') *a.* [Gk. *eu*, well; *pyren*, fruit-stone.] *Appl.* sperms of normal type; *cf.* apyrene, oligopyrene.

**eurybaric** (ū'rībār'īk) *a.* [Gk. *eury*s, wide; *baros*, weight.] *Appl.* animals adaptable to great differences in altitude, *opp.* stenobaric.

**eurybathic** (ū'rībāth'īk) *a.* [Gk. *eury*s, wide; *bathys*, deep.] Having a large vertical range of distribution, *opp.* stenobathic.

**eurychoric** (ū'rikō'rik) *a.* [Gk. *eury*s, wide; *choros*, place.] Widely distributed, *opp.* stenochoric.

**eurycyst** (ū'risīst) *n.* [Gk. *eury*s, wide; *kystis*, bladder.] Large cell of middle vein in mosses; deuter cell; pointer cell.

**euryhaline** (ū'rīhāl'in) *a.* [Gk. *eury*s, wide; *halinos*, saline.] *Appl.* marine organisms adaptable to a wide range of salinity, *opp.* stenohaline.

**euryhygric** (ū'rīhī'grik) *a.* [Gk. *eury*s, wide; *hygros*, wet.] *Appl.* organisms adaptable to a wide range of atmospheric humidity.

**euryphagous** (ū'rīf'āgūs) *a.* [Gk. *eury*s, wide; *phagein*, to eat.] Subsisting on a large variety of foods, *opp.* stenophagous; *cf.* omnivorous.

**eurypylous** (ū'ripī'lūs) *a.* [Gk. *eury*s, broad; *pyle*, gate.] Wide at the opening; *appl.* canal system of sponges in which the chambers open directly into excurrent canals by wide apopyles, and receive water from incurrent canals through propopyles.

**eurysome** (ū'rīsōm) *a.* [Gk. *eury*s, broad; *soma*, body.] Short and stout, *opp.* leptosome.

**eurythermic** (ū'rīthēr'mīk) *a.* [Gk.

*eury*s, wide; *therme*, heat.] *Appl.* organisms adaptable to a wide range of temperature; eurythermous, *opp.* stenothermic.

**eurytopic** (ū'rītōp'īk) *a.* [Gk. *eury*s, wide; *topos*, place.] Having a wide range of geographical distribution, *opp.* stenotopic.

**eusporangiate** (ū'spōrān'jīāt) *a.* [Gk. *eu*, well; *sporos*, seed; *anggeion*, vessel.] Having sporogenous tissue derived from inner cell that follows periclinal division of superficial initial; *cf.* leptosporangiate.

**Eustachian** (ūstā'kiān) *a.* [*B. Eustachio*, Italian physician]. *Pert.* tube or canal connecting tympanic cavity with pharynx; *pert.* valve guarding orifice of inferior vena cava in atrium of heart.

**eustele** (ūstē'lē) *n.* [Gk. *eu*, well; *stēle*, pillar.] The arrangement of vascular tissue into collateral or bicollateral bundles with conjunctive tissue between, as in gymnosperms and dicotyledons.

**eusternum** (ūstēr'nūm) *n.* [Gk. *eu*, well; *sternon*, breastplate.] A sternal sclerite of insects; antesternite, basisternum.

**eustomatous** (ūstōm'ātūs) *a.* [Gk. *eu*, well; *stoma*, mouth.] Having a distinct mouth-like opening.

**eutelegensis** (ū'tēlējēn'ēsīs) *n.* [Gk. *eu*, well; *tele*, afar; *genesis*, descent.] Improved breeding by artificial insemination.

**euthenics** (ūthēn'īks) *n.* [Gk. *euthen-ein*, to thrive.] The science of betterment of human race on the side of intellect and morals; the study of environmental agencies contributing to racial improvement.

**eutherian** (ūthē'rīān) *a.* [Gk. *eu*, well; *therion*, small animal.] *Appl.* placental mammals with development uterine till full-time.

**euthycomous** (ūthīk'ōmūs) *a.* [Gk. *euthys*, straight; *kome*, hair.] Straight-haired.

**euthyneurous** (ū'thīnū'rūs) *a.* [Gk. *euthys*, straight; *neuron*, nerve.] Having visceral loop of nervous system untwisted.

**eutrophic** (üt'rōf'ik) *a.* [Gk. *eu*, well; *trophē*, nourishment.] Providing, or *pert.*, adequate nutrition. *Opp.* dystrophic.

**evagination** (ē'vājīnā'shūn) *n.* [L. *e*, out; *vagina*, sheath.] The process of unsheathing, or product of this process; an outgrowth.

**evanescent** (ēv'ānēs'ēnt) *a.* [L. *evanescere*, to vanish.] Disappearing early; *appl.* flowers which fade quickly.

**evection** (ēvēk'shūn) *n.* [L. *e*, out; *vehere*, to convey.] Displacement of parent cell at septum of a filament, causing dichotomous appearance, as in certain algae.

**eviscerate** (ēvis'ērāt) *v.* [L. *ex*, out; *viscera*, entrails.] To disembowel; to eject the viscera, as do holothurians on capture.

**evocator** (ēv'ōkātōr) *n.* [L. *evocator*, caller forth.] The chemical stimulus furnished by an organiser, *q.v.*

**evolute** (ēv'ōlūt) *a.* [L. *evolvere*, to unroll.] Turned back; unfolded.

**evolutility** (ēv'ōlūtīl'itī) *n.* [L. *evolvere*, to unroll.] Capability to evolve or change in structure; capacity to change in growth and form as a result of nutritional or other environmental factors.

**evolution** (ēv'ōlū'shūn) *n.* [L. *evolvere*, to unroll.] The gradual development of organisms from pre-existing organisms since the dawn of life.

**exalate** (ēksā'lāt) *a.* [L. *ex*, without; *ala*, wing.] Not having wing-like appendages; apterous.

**exalbuminous** (ēk'sālbū'mīnūs) *a.* [L. *ex*, without; *albumen*, white of egg.] Without albumen; *appl.* seeds without endosperm or perisperm; exendospermous.

**exannulate** (ēksān'ūlāt) *a.* [L. *ex*, without; *annulus*, ring.] Having a sporangium not furnished with an annulus; *appl.* certain ferns.

**exarate** (ēks'ārāt) *a.* [L. *exaratus*, ploughed up.] *Appl.* a pupa with free wings and legs.

**exarch** (ēks'ārċ) *n.* [L. *ex*, without;

[Gk. *arche*, beginning.] With protoxylem strands outside metaxylem, or in touch with pericycle.

**exasperate** (ēgzās'pērāt) *a.* [L. *exasperare*, to roughen.] Furnished with hard, stiff points.

**excentric** (ēksēn'trĭk) *a.* [L. *ex*, out of; *centrum*, centre.] One-sided; having the two portions of lamina unequally developed.

**exciple** (ēk'sīpl) *n.* [L. *excipula*, receptacles.] The marginal wall, or outer covering, of apothecium in certain lichens; excipulum.

**excitability**,—capacity of a living cell, or tissue, to respond to an environmental change or stimulus.

**excitation** (ēk'sītā'shūn) *n.* [L. *excitare*, to rouse.] Act of producing or increasing stimulation; immediate response of protoplasm to a stimulus.

**excitatory cells**,—motor cells in sympathetic nervous system.

**excitonutrient** (ēksī'tōnū'triēnt) *a.* [L. *excitare*, to rouse; *nutriens*, feeding.] Causing or increasing nutrient activities.

**exconjugant** (ēkskōn'joogānt) *n.* [L. *ex*, out; *conjugare*, to yoke.] An organism which is leading an independent life after conjugation with another.

**excreta** (ēkskrē'tā) *n. plu.* [L. *excretum*, separated.] Waste material eliminated from body or any tissue thereof; deleterious substances formed within a plant.

**excrete** (ēkskrē't) *v.* [L. *ex*, out; *cernere*, to sift.] To eliminate waste material from body; to withdraw useless materials from the place of most active metabolism in plant.

**excretion** (ēkskrē'shūn) *n.* [L. *ex*, out; *cernere*, to sift.] Act of eliminating waste material, or the product of the elimination.

**excurrent** (ēkskūr'ēnt) *a.* [L. *ex*, out; *currere*, to run.] *Pert.* ducts, channels, or canals in which there is an outgoing flow; with undivided main stem; having midrib projecting beyond apex.

**excurved** (ĕkskŭrvd') *a.* [L. *ex*, out; *curvare*, to curve.] Curved outwards from centre.

**excystation** (ĕks'sistā'shŭn) *n.* [L. *ex*, out of; Gk. *kystis*, bladder.] Emergence from encysted condition.

**exendospermous** (ĕks'ĕndōspēr'mŭs) *a.* [L. *ex*, without; Gk. *endon*, within; *sperma*, seed.] Exalbuminous, *q.v.*

**exflagellation** (ĕksflāj'ĕlā'shŭn) *n.* [L. *ex*, out of; *flagellum*, whip.] Process of microgamete formation by microgametocyte in Haemosporidia.

**exfoliation** (ĕksfō'liā'shŭn) *n.* [L. *ex*, out; *folium*, leaf.] The shedding of leaves or scales from a bud.

**exhalant** (ĕks'hālānt) *a.* [L. *ex*, out; *halare*, to breathe.] Capable of carrying from the interior outwards.

**exindusiate** (ĕk'sindū'ziāt) *a.* [L. *ex*, out; *indusium*, cover.] Having the sporangia uncovered or naked.

**exine**,—extine, *q.v.*

**exinguinal** (ĕk'sing'gwīnāl) *a.* [L. *ex*, out; *inguen*, groin.] Occurring outside the groin; *pert.* second joint of arachnid leg.

**exites** (ĕk'sits) *n. plu.* [Gk. *exo*, without.] Offshoots on outer lateral border of axis of certain arthropod limbs.

**exocardiac** (ĕk'sōkār'diāk) *a.* [Gk. *exo*, without; *kardia*, heart.] Situated outside the heart.

**exocarp** (ĕk'sōkārp) *n.* [Gk. *exo*, without; *karpōs*, fruit.] Outer layer of the pericarp; epicarp.

**exoccipital** (ĕk'sōksip'itāl) *a.* [L. *ex*, without; *occiput*, back of head.] *Pert.* a skull bone on each side of the foramen magnum.

**exochiton** (ĕk'sōki'tōn) *n.* [Gk. *exo*, without; *chiton*, coat.] Outermost layer of oögonial wall, as in Fucales; exochite; *cf.* endochiton, mesochiton.

**exochorion** (ĕk'sōkō'riōn) *n.* [Gk. *exo*, without; *chorion*, chorion.] Outer layer of membrane secreted by follicular cells surrounding the egg in ovary of insects.

**exocoel** (ĕk'sōsēl) *n.* [Gk. *exo*, without; *koilos*, hollow.] The space

between mesenteries of adjacent couples in certain Zoantharia; exocoelom, *q.v.*

**exocoelar** (ĕk'sōsē'lār) *a.* [Gk. *exo*, without; *koilos*, hollow.] *Pert.* parietal wall of coelom.

**exocoelic** (ĕk'sōsē'lik) *a.* [Gk. *exo*, without; *koilos*, hollow.] In Zoantharia, *pert.* space between adjacent couples of mesenteries; *appl.* radial areas on disc; *appl.* outermost cycle of tentacles.

**exocoelom** (ĕk'sōsē'lōm) *n.* [Gk. *exo*, without; *koilos*, hollow.] Extraembryonic body cavity of embryo.

**exocone** (ĕk'sōkōn) *a.* [Gk. *exo*, without; *konos*, cone.] *Appl.* insect compound eye with cones of cuticular origin.

**exocrine** (ĕk'sōkrīn) *a.* [Gk. *exo*, without; *krinein*, to separate.] *Appl.* glands whose secretion is drained by ducts; *cf.* endocrine, apocrine.

**exocuticula** (ĕk'sōkūtīk'ulā) *n.* [Gk. *exo*, without; L. *dim.* of *cutis*, skin.] Middle layer of insect cuticle, between endocuticula and epicuticula; outer layer of integument in spiders.

**exoderm** (ĕk'sōdērm) *n.* [Gk. *exo*, without; *derma*, skin.] The dermal layer of sponges.

**exodermis** (ĕk'sōdēr'mis) *n.* [Gk. *exo*, without; L. *dermis*, skin.] A specialised layer below the piliferous layer; ectoderm, *q.v.*

**exoenzyme** (ĕk'sōēn'zim) *n.* [Gk. *exo*, outside; *zyme*, leaven.] Any extracellular enzyme.

**exogamete** (ĕk'sōgāmēt') *n.* [Gk. *exo*, without; *gametes*, mate.] A reproductive cell which fuses with one derived from another source.

**exogamy** (ĕksōg'āmī) *n.* [Gk. *exo*, without; *gamos*, marriage.] Conjugation or fusion of isogametes with others of a different brood; outbreeding.

**exogastric** (ĕk'sōgās'trik) *a.* [Gk. *exo*, without; *gaster*, stomach.] Having the shell coiled towards dorsal surface of body.

- exogastrula** (ĕk'sögäs'troolä) *n.* [Gk. *exo*, without; *gaster*, stomach.] An hour-glass shaped sea-urchin larva induced experimentally.
- exogenous** (ĕksöj'ĕnūs) *a.* [Gk. *exo*, outside; *-genes*, producing.] Originating outside the organism; developed from superficial tissue, the superficial meristem; growing from parts which were previously ossified; *appl.* metabolism concerned with effector activities and temperature.
- exognathion** (ĕk'sögnäth'ĭön) *n.* [Gk. *exo*, without; *gnathos*, jaw.] The maxillary portion of upper jaw; the maxilla with exception of endognathion and mesognathion.
- exo-intine** (ĕk'söin'tĭn) *n.* [Gk. *exo*, without; L. *intus*, within.] Middle layer of a spore-covering, between extine and intine.
- exonephric** (ĕk'sönĕf'rik) *a.* [Gk. *exo*, without; *nephros*, kidney.] With nephridia opening to exterior; *opp.* enteronephric, *appl.* Oligochaeta.
- exoperidium** (ĕk'söpĕrid'ĭüm) *n.* [Gk. *exo*, without; *peridion*, a small wallet.] The outer layer of spore case in certain fungi; epiperidium.
- exophylaxis** (ĕk'sofiläk'sis) *n.* [Gk. *exo*, without; *phylax*, guard.] Protection afforded against pathogenic organisms by skin secretions.
- exoplasm** (ĕk'söpläzm) *n.* [Gk. *exo*, without; *plasma*, mould.] Ectoplasm, *q.v.*
- exopodite** (ĕks'öpödit) *n.* [Gk. *exo*, without; *pous*, foot.] The outer branch of a typical biramous crustacean limb.
- exoscopic** (ĕk'sösköp'ik) *a.* [Gk. *exo*, without; *skopein*, to look.] With apex emerging through arche-gonium, *appl.* embryo. *Opp.* endoscopic.
- exoskeleton** (ĕk'söskĕl'ĕtön) *n.* [Gk. *exo*, without; *skeletos*, hard.] A hard supporting structure secreted by ectoderm or by skin.
- exosmosis** (ĕk'sösmō'sis) *n.* [Gk. *exo*, without; *osmos*, impulse.] The passing out through a membrane of a gas or fluid. *Opp.* endosmosis.
- exospore** (ĕk'söspör), **exosporium** (ĕk'söspör'riüm) *n.* [Gk. *exo*, without; *sporos*, seed.] Outer coating of sporangial wall; a conidium.
- exostome** (ĕk'söstöm) *n.* [Gk. *exo*, without; *stoma*, mouth.] Opening or foramen in outer wall of ovule.
- exostosis** (ĕk'söstō'sis) *n.* [Gk. *exo*, without; *osteon*, bone.] Formation of knots on surface of wood; formation of knob-like outgrowths of bone at a damaged portion, or of dental tissue in a similar way.
- exotheca** (ĕk'söthĕ'kā) *n.* [Gk. *exo*, without; *theke*, box.] The extra-capsular tissue of a coral.
- exothecal** (ĕk'söthĕ'käl) *a.* [Gk. *exo*, without; *theke*, box.] *Pert.* tissue outside the theca of a coral.
- exothecate** (ĕk'söthĕ'kāt) *a.* [Gk. *exo*, without; *theke*, box.] Having an exotheca.
- exothecium** (ĕk'söthĕ'siüm) *n.* [Gk. *exo*, without; *theke*, case.] The outer specialised dehiscing cell layer of the gymnosperm sporangium; *cf.* endothecium.
- exotic** (ĕgzöt'ik) *a.* [Gk. *exotikos*, foreign.] Introduced or non-endemic. *n.* A foreign plant or animal not acclimatised.
- exotospore** (ĕksō'tospör) *n.* [Gk. *exotos*, outward; *sporos*, seed.] A sporozoite.
- exotoxin** (ĕk'sötök'sin) *n.* [Gk. *exo*, without; *toxikon*, poison.] A soluble toxin excreted by bacteria; *opp.* endotoxin.
- exotropism** (ĕksöt'röpizm) *n.* [Gk. *exo*, without; *trope*, turn.] Curvature away from axis, exhibited by a laterally geotropic organ.
- expantin**, --presumable neurohumor inducing expansion of chromatophores in crustaceans. *Opp.* contractin.
- expiration** (ĕk'spirä'shün) *n.* [L. *ex*, out; *spirare*, to breathe.] The act of emitting air from lungs; emission of carbon dioxide by plants and animals.
- explantation** (ĕk'splāntä'shün) *n.* [L. *ex*, out of; *plantare*, to plant.] Tissue culture away from organism of its origin.

**explosive**,—*appl.* flowers in which pollen is suddenly discharged on decompression of stamens by alighting insect, as of *Cytisus* and *Ulex*; *appl.* fruits with sudden dehiscence, seeds being discharged to some distance; *appl.* evolution, rapid formation of numerous types; tachytypogenesis; *appl.* speciation, rapid formation of species from a single species in one locality.

**expressivity**,—the degree to which a gene produces an effect.

**exsculptate** (ĕks'skŭlp'tāt) *a.* [L. *ex*, out; *sculperē*, to carve.] Having the surface marked with more or less regularly arranged raised lines with grooves between.

**exscutellate** (ĕkskŭ'tĕlāt) *a.* [L. *ex*, without; *scutellum*, small shield.] Having no scutellum; *appl.* insects.

**exserted** (ĕksĕr'tĕd) *a.* [L. *exserere*, to stretch out.] Protruding beyond some including organ or part; *appl.* stamens which project beyond corolla.

**exsertile** (ĕksĕr'tĭl) *a.* [L. *exserere*, to stretch out.] Capable of extrusion.

**exstipulate** (ĕkstĭp'ŭlāt) *a.* [L. *ex*, without; *stipula*, stem.] Without stipules.

**extrophy** (ĕks'strŏfĭ) *n.* [Gk. *exo*, outwards; *strophē*, turning.] Eversion, as normal or anomalous projection of luteal tissue to exterior of ovary.

**exsufflation** (ĕks'sŭflā'shŭn) *n.* [L. *ex*, out; *sufflare*, to blow.] Forced expiration from lungs.

**extend** (ĕkstĕnd') *v.* [L. *ex*, out; *tendere*, to stretch.] To straighten out, *opp.* to flex or bend any organ.

**extensor** (ĕkstĕn'sŏr) *n.* [L. *ex*, out; *tendere*, to stretch.] Any muscle which extends a limb or part. *Opp.* flexor.

**exterior** (ĕkstĕ'rĭŏr) *a.* [L. *externus*, on outside.] Situated on side away from axis or definitive plane.

**external** (ĕkstĕr'nāl) *a.* [L. *externus*, outside.] Outside or near the outside; away from the mesial plane.

**externum** (ĕkstĕr'nŭm) *n.* [L. *externus*, outward.] Outer region or cortex of a mitochondrion or of Golgi apparatus.

**exteroceptor** (ĕk'stĕrŏsĕp'tŏr) *n.* [L. *exter*, outside; *capere*, to take.] A receptor which receives stimuli from outside the body; a contact receptor, or distance receptor.

**extine** (ĕk'stĭn) *n.* [L. *exter*, outside.] Outer coat of spore or pollen grain; exosporium. *Opp.* intine.

**extra-axillary** (ĕk'strā-āks'ĭlārĭ) *a.* [L. *extra*, beyond; *axilla*, armpit.] Arising above axil of leaf, said of branches which develop from upper bud when there are more than one in connection with axil.

**extrabranial** (ĕk'strābrāŋ'kiāl) *a.* [L. *extra*, beyond; Gk. *branchia*, gills.] Arising outside the branchial arches.

**extracapsular** (ĕk'strākāp'sŭlār) *a.* [L. *extra*, outside; *capsula*, small box.] Arising or situated outside a capsule; *appl.* ligaments, etc., in connection with a joint; *appl.* protoplasm lying outside the central capsule in some protozoa; *appl.* dendrites.

**extracellular** (ĕk'strāsĕl'ŭlār) *a.* [L. *extra*, outside; *cellula*, little cell.] Occurring outside the cell; diffused out of the cell.

**extracolumella** (ĕk'strākŏl'ŭmĕl'ā) *n.* [L. *extra*, beyond; *columella*, small column.] Distal element of auditory skeletal structure; also hyostapes.

**extraembryonic** (ĕk'strāĕm'brĭŏn'ĭk) *a.* [L. *extra*, outside; Gk. *embryon*, foetus.] Situated outside the embryo proper, as portion of blastoderm.

**extraenteric** (ĕk'strāĕntĕr'ĭk) *a.* [L. *extra*, outside; Gk. *enteron*, gut.] Outside the alimentary tract.

**extrafloral** (ĕk'strāflŏ'rāl) *a.* [L. *extra*, outside; *flos*, flower.] Situated outside the flower; *appl.* nectaries.

**extrafoveal** (ĕk'strāfŏ'vēāl) *a.* [L. *extra*, beyond; *fovea*, depression.] *Pert.* macula lutea surrounding fovea centralis; *appl.* rod vision. *Opp.* foveal.



**extranuclear** (ĕk'strānū'klĕār) *a.* [L. *extra*, outside; *nucleus*, kernel] *Pert.* structures or forces acting outside the nucleus; situated outside the nucleus.

**extraocular** (ĕk'strāōk'ulār) *a.* [L. *extra*, outside; *oculus*, eye.] Exterior to the eye; *appl.* antennae of insects.

**extraperitoneal**,—subperitoneal.

**extraspicular** (ĕk'strāspĭk'ulār) *a.* [L. *extra*, outside; *spicula*, small spike.] With spicules having one end embedded in spongin and the other end free.

**extrastapedial** (ĕk'strāstāpē'diāl) *a.* [L. *extra*, beyond; *stapes*, stirrup.] Extending beyond the stapedio-columellar junction.

**extrastelar** (ĕk'strāstē'lār) *a.* [L. *extra*, outside; Gk. *stela*, column.] *Pert.* ground tissue outside vascular tissue.

**extravaginal** (ĕk'strāvāj'īnāl) *a.* [L. *extra*, outside; *vagina*, sheath.] Forcing a way through the sheath, as shoots of many plants.

**extravasate** (ĕkstrāv'āsāt) *v.* [L. *extra*, outside; *vas*, vessel.] To force its way from the proper channel into the surrounding tissue, said of blood, etc.

**extraventricular** (ĕk'strāvĕntrĭk'ulār) *a.* [L. *extra*, beyond; *ventriculus*, belly.] Situated or arising beyond the ventricle.

**extraxylary** (ĕk'strāzĭ'lārĭ) *a.* [L. *extra*, outside; Gk. *xylon*, wood.] On the outside of the xylem; *appl.* fibres.

**extremity** (ĕkstrēm'ītĭ) *n.* [L. *extremitas*, limit.] The limb, or distal portion of a limb; distal end of any limb-like structure.

**extrinsic** (ĕkstrĭn'sĭk) *a.* [L. *extrinsecus*, on outside.] *Pert.* muscles not wholly within the part; *appl.* brightness due to objective light intensity. *Opp.* intrinsic.

**extrorse** (ĕkstrōrs') *a.* [L. *extrorsus*, outwardly.] Turned away from axis; *appl.* dehiscence of anthers.

**exudation** (ĕk'sūdā'shūn) *n.* [L. *exudare*, to sweat.] Any discharge

through an incision or pore, *e.g.* gums, resins, moisture, etc.

**exumbral** (ĕksūm'brāl) *a.* [L. *ex*, out; *umbra*, shade.] *Pert.* rounded upper surface of a jelly-fish.

**exumbrella** (ĕks'ūmbrel'ā) *n.* [L. *ex*, out; *umbra*, shade.] Upper, convex surface of jelly-fish.

**exuviae** (ĕksū'vĭē) *n. plu.* [L. *exuere*, to strip off.] Cast-off skins, shells, etc., of animals.

**exuvial** (ĕksū'viāl) *a.* [L. *exuere*, to strip off.] Ecdysial; *appl.* insect glands whose secretion facilitates ecdysis.

**eye** (i) *n.* [A.S. *ēage*.] The organ of sight or vision; a pigment spot in various animals and in lower plants; the bud of a tuber.

**eye-spots**,—certain pigment spots in many lower plants and animals, and also in some vertebrates, which are supposed to have a visual function; ocelli.

**eye-teeth**,—upper canine teeth.

**F<sub>1</sub>**,—denotes first filial generation, or hybrids arising from a first cross, successive generations arising from this one being denoted by F<sub>2</sub>, F<sub>3</sub>, etc. P<sub>1</sub> denotes parents of F<sub>1</sub> generation, P<sub>2</sub> the grandparents, etc.

**fabella** (fābēl'ā) *n.* [L. *fabella*, small bean.] A small fibro-cartilage ossified in the gastrocnemius.

**fabiform** (fāb'ĭfōrm) *a.* [L. *faba*, bean; *forma*, shape.] Bean-shaped.

**Fabrician** [J. C. Fabricius, Danish entomologist]. *Appl.* a classification of the Arthropoda based on the anatomy of the mouth-parts.

**facet** (fās'ēt, fāsēt') *n.* [L. *facies*, face.] A smooth, flat, or rounded surface for articulation; an ocellus; corneal portion of insect eye.

**facial** (fā'shāl) *a.* [L. *facies*, face.] *Pert.* face; *appl.* artery, nerve, bone, vein, etc.

**faciation** (fāsīlā'shūn) *n.* [*L. facies*, face.] Formation or character of facies; a grouping of dominant species within an association; geographical differences in abundance or proportion of dominant species in a community; *cf.* lociation.

**facies** (fā'shīēz) *n.* [*L. facies*, face.] The face; a surface, in anatomy; the general aspect of a plant; aspect, as superior and inferior; a particular modification of a biotope; a grouping of dominant plants in the course of a successional series; one of different types of deposit in a geological series or system; the palaeontological and lithological character of a deposit.

**facilitation** (fāsilitā'shūn) *n.* [*L. facilitas*, easiness.] Diminution of resistance to a stimulus subsequent to previous stimulation, as of nerves; Ger. *Bahnung*.

**faciolingual** (fā'siōling'gwāl) *a.* [*L. facies*, face; *lingua*, tongue.] *Pert.* or affecting face and tongue.

**factor** (fāk'tōr) *n.* [*L. facere*, to make.] Any agent (biotic, climatic, nutritional, etc.) contributing to a result; a Mendelian factor or gene; a determinant.

**factorial** (fāktō'riāl) *a.* [*L. facere*, to make.] *Pert.* genetic factors or genes.

**facultative** (fāk'ultā'tiv) *a.* [*L. facultas*, faculty.] Having the power of living under different conditions; conditional; *appl.* organisms which may be normally self-dependent, but which are adaptable to a parasitic or semiparasitic mode of life; *appl.* aerobes, anaerobes; *appl.* parthenogenesis, symbionts, saprophytes, gametes, etc. *Opp.* obligate.

**faeces** (fē'sēz) *n. plu.* [*L. faeces*, dregs.] Excrement from alimentary canal.

**falcate** (fāl'kāt) *a.* [*L. falx*, sickle.] Sickle-shaped; hooked.

**falces** (fāl'sēz) *n. plu.* [*L. falces*, sickles.] Chelicerae, of arachnids.

**falciform** (fāl'sifōrm) *a.* [*L. falx*, sickle; *forma*, shape.] Sickle-shaped or scythe-shaped; *appl.*

ligament, a dorso-ventral fold of peritoneum, attached to under surface of diaphragm and anterior and upper surfaces of liver; *appl.* process, processus falciformis, a fold of choroid penetrating retina near optic disc and ending at back of lens, functioning in accommodation in teleosts; *appl.* body, a sporozoite.

**falcula** (fāl'kūlā) *n.* [*L. falcula*, little hook.] A curved scythe-like claw.

**falclate** (fāl'kūlāt) *a.* [*L. falcula*, little hook.] Curved, and sharp at the point.

**Fallopian tube** [*G. Fallopio*, Italian anatomist]. Uterine tube, upper portion of oviduct in mammals; anterior portion of the Müllerian duct.

**false or asternal ribs**,—those ribs whose cartilaginous ventral ends do not join the sternum directly.

**false vocal cords**,—ventricular folds of larynx, two folds of mucous membrane, each covering a ligament, anterior to true vocal cords.

**falx** (fālks) *n.* [*L. falx*, sickle.] A sickle-shaped fold of the dura mater; inguinal aponeurosis of transverse and internal oblique muscles of abdomen.

**family** (fām'ilt) *n.* [*L. familia*, household.] Term used in classification, signifying a group of related genera, families being grouped into orders.

**fan** (fān) *n.* [*A.S. fann*, fan.] A bird's tail feathers; a flabellum, *q.v.*; a rhipidium, *q.v.*; vannus, *q.v.*

**fang** (fāng) *n.* [*A.S. fang*, grip.] A long-pointed tooth, especially the poison tooth of snakes; the root of a tooth.

**faradisation** (fār'adīzā'shūn) *n.* [*M. Faraday*, English physicist]. Method of stimulation inducing partial or complete tetanus.

**farctate** (fār'kāt) *a.* [*L. farctus*, stuffed.] Filled, not hollow.

**farina** (fārē'nā, fārī'nā) *n.* [*L. farina*, flour.] The pollen of plants; the fine meal-like powder found on some insects.

**farinaceous** (fâr'inā'shūs) *a.* [L. *farina*, flour.] Containing flour; starchy; farinose.

**farinose** (fâr'inōs) *a.* [L. *farina*, flour.] Producing, or covered with, fine powder or dust.

**fascia** (fās'īā, fāsh'īā) *n.* [L. *fascia*, band.] An ensheathing band of connective tissue.

**fascial** (fās'īāl, fāsh'īāl) *a.* [L. *fascia*, bundle.] *Pert.* a fascia, ensheathing and binding.

**fasciated** (fās'īā'tēd, fāsh'īā'tēd) *a.* [L. *fascia*, bundle.] Banded; arranged in fascicles; *appl.* stems or branches malformed and flattened.

**fasciation** (fāshīā'shūn) *n.* [L. *fascia*, bundle.] The formation of fascicles; coalescent development of branches of a shoot-system, as in cauliflower.

**fascicle** (fās'īkl) *n.* [L. *fasciculus*, small bundle.] A small bundle or tuft, as of fibres, or of leaves.

**fascicular** (fāsīk'ulār) *a.* [L. *fasciculus*, small bundle.] *Pert.* a fascicle; arranged in bundles or tufts; *appl.* cambium, tissue.

**fasciculus** (fāsīk'ulūs) *n.* [L. *fasciculus*, small bundle.] A fascicle; a group, bundle, or tract of nerve fibres, as of medulla spinalis.

**fasciola** (fāsī'olā) *n.* [L. *fasciola*, small bandage.] A narrow colour band; a delicate lamina continuous with supracallosal gyrus.

**fasciole** (fās'īōl) *n.* [L. *fasciola*, small bandage.] Ciliated band on certain echinoids for sweeping water over surrounding parts.

**fastigate** (fāstij'īāt) *a.* [L. *fastigare*, to slope up.] With branches close to stem and erect, *opp.* patent; in pyramidal or conical form.

**fastigium** (fāstij'īūm) *n.* [L. *fastigium*, gable.] Angular top of roof of fourth ventricle, formed by contact of anterior and posterior medullary vela of cerebellum.

**fat** (fât) *n.* [A.S. *faet*, fat.] Adipose tissue; any part of animal tissue which has its cells filled with a greasy or oily reserve material.

**fat-body**,—one of the vascularised tissue structures filled with fat globules and associated with gonads in Amphibia; one of the subcutaneous organs along ventral sides and enlarged during breeding season in Lacertilia; tissue of indeterminate form distributed throughout body of insects and functioning as nutritive reserve; corpus adiposum; epiploon.

**fat soluble**,—*appl.* vitamins A, D, E, and K.

**fatigue** (fâtēg') *n.* [L. *fatigare*, to weary.] Effect produced by long stimulation on cells of an organ.

**fauces** (fôs'ēz) *n. plu.* [L. *fauces*, throat.] Upper or anterior part of throat between palate and pharynx; mouth of a spirally coiled shell; throat of a corolla.

**fauna** (fôn'ā) *n.* [L. *faunus*, god of woods.] All the animals peculiar to a country, area, or period.

**faunal region**,—an area characterised by a special group or groups of animals.

**faunula** (fôn'ulā) *n.* [*Dim.* of *fauna*.] Animal population of a small unit area, as of intestine, bark, etc.

**favella** (fāvēl'ā) *n.* [L. *favus*, honey-comb.] A conceptacle of certain red algae.

**faveolate** (fāvē'olāt) *a.* [L. *faveolus*, *dim.* of *favus*, honey-comb.] Honey-combed or alveolate.

**faveolus** (fāvē'olūs) *n.* [L. *faveolus*, small honey-comb.] A small depression or pit; alveola.

**favoid** (fāv'oid) *a.* [L. *favus*, honey-comb; Gk. *eidos*, form.] Resembling a honey-comb.

**favose** (fāvōs') *a.* [L. *favus*, honey-comb.] Honeycombed; alveolate.

**feather-veined**,—*appl.* leaf in which veins run out from mid-rib in regular series at an acute angle; pinnately veined.

**feces**,—faeces.

**Fechner's Law** [G. T. Fechner, German psychophysicist]. The tendency of intensity of sensation to vary as the logarithm of the stimulus.

**fecundity** (fĕkŭn'dĭtĭ) *n.* [L. *fecundus*, fertile.] Power of a species to multiply rapidly; capacity to form reproductive elements.

**female** (fĕ'māl) *n.* [L. *femina*, women.] A pistillate flower; an egg-producing or young-producing animal—symbol ♀.

**female pronucleus**,—the nucleus left in the ovum after maturation.

**femoral** (fĕm'ōrāl) *a.* [L. *femur*, thigh.] *Pert.* thigh; *appl.* artery, vein, nerve, etc.; crural.

**femur** (fĕ'mŭr) *n.* [L. *femur*, thigh.] The thigh-bone, proximal bone of hind limb in vertebrates; third joint in insect and spider leg counting from proximal end.

**fenchone** (fĕn'chōn) *n.* [Ger. *Fenchel*, fennel.] A ketone, the essential oil in oil of fennel;  $C_{10}H_{16}O$ .

**fenestra** (fĕnĕs'trā) *n.* [L. *fenestra*, window.] An opening in a bone, or between two bones, or in a plant membrane; a pit on head of cockroach; a transparent spot on wings of insects.

**fenestrate** (fĕnĕs'trāt) *a.* [L. *fenestra*, window.] Having small perforations or transparent spots, *appl.* insect wings; having numerous perforations, *appl.* leaves, dissepiments.

**fenestrated membrane**,—a close network of yellow elastic fibres resembling a membrane with perforations, as in inner tunic of arteries.

**fenestrule** (fĕnĕs'trool) *n.* [*Dim.* of L. *fenestra*, window.] Small opening between branches of a polyzoan colony.

**feral** (fĕ'rāl) *a.* [L. *fera*, wild animal.] Wild, or escaped from cultivation or domestication and reverted to wild state.

**ferment** (fĕr'mĕnt) *n.* [L. *fermentum*, ferment.] An organised substance, capable of producing fermentation; an enzyme.

**fermentation** (fĕr'mĕntā'shŭn) *n.* [L. *fermentum*, ferment.] A transformation occurring in organic substance, usually of a carbo-

hydrate, caused by action of a ferment; zymosis.

**ferruginous** (fĕroo'jinŭs) *a.* [L. *ferruginus*, rusty.] Having the appearance of iron rust.

**fertile** (fĕr'tĭl) *a.* [L. *fertilis*, fertile.] Capable of producing living offspring; of eggs or seeds, capable of developing.

**fertilisation** (fĕr'tilfā'shŭn) *n.* [L. *fertilis*, fertile.] The union of male and female pronuclei; pollination.

**fertilisation - tube**,—process of an antheridium, penetrating oogonial wall, for passage of male gamete in certain fungi.

**fertility vitamin**,—a tocopherol or vitamin E; anti-sterility vitamin.

**fertilizin** (fĕr'tilī'zĭn) *n.* [L. *fertilis*, fertile.] A soluble colloidal substance produced by certain eggs and causing sperm agglutination, also inducing cleavage.

**festoon** (fĕstoon') *n.* [F. *feston*, garland.] The margin, with rectangular divisions, of integument in ticks.

**fetlock** (fĕt'lŏk) *n.* [Icel. *fet*, step; *lokka*, tuft of hair.] The tuft of hair behind a horse's pastern joint; the pastern joint itself.

**fetus**,—see foetus.

**fibre** (fĭ'bĕr) *n.* [L. *fibra*, band.] A strand of nerve, muscle, connective, or bast tissue; elongated plant-cell for mechanical strength; fiber.

**fibre tracheids**,—fibres of a nature intermediate between that of libriform fibres and of tracheids.

**fibril** (fĭ'brĭl) *n.* [L. *fibrilla*, small fibre.] A small thread-like structure or fibre; a component part of a fibre; a root-hair; a slender filiform outgrowth on some lichens.

**fibrillae** (fĭbril'ē) *n. plu.* [L. *fibrilla*, small fibre.] Thread-like branches of roots; minute elastic fibres secreted within spongin cells; minute muscle-like threads found in various infusorians; fibrils.

**fibrillate** (fĭ'brilāt) *a.* [L. *fibrilla*, small fibre.] Having fibrillae or hair-like structures.

**fibrillose** (fi'brilōs, fibril'ōs) *a.* [L. *fibrilla*, small fibre.] Furnished with fibrils; *appl.* mycelia of certain fungi.

**fibrin** (fi'brīn) *n.* [L. *fibra*, band.] An insoluble protein found in blood after coagulation, readily digested in gastric juice.

**fibrinogen** (fibrin'ōjēn) *n.* [L. *fibra*, band; Gk. *-genes*, producing.] A soluble protein of blood, which, by activity of thrombin, yields fibrin and produces coagulation.

**fibroblast** (fi'brōblāst) *n.* [L. *fibra*, band; Gk. *blastos*, bud.] A connective tissue cell; fibrocyte, desmocyte.

**fibro-cartilage** (fi'brō-kār'tilēj) *n.* [L. *fibra*, band; *cartilago*, gristle.] A kind of cartilage whose matrix is mainly composed of fibres similar to connective tissue fibres, found at articulations, cavity margins, and osseous grooves.

**fibrous** (fi'brūs) *a.* [L. *fibra*, band.] Composed of fibres; *appl.* tissue, roots, mycelium, etc.

**fibula** (fi'b'ulā) *n.* [L. *fibula*, buckle.] Outer and smaller shin bone.

**fibulare** (fi'b'ulār'rē) *n.* [L. *fibula*, buckle.] The outer element of proximal row of tarsus.

**field**,—a dynamic system in which all the parts are interrelated and in equilibrium, so that a change in any part affects the whole.

**filament** (fil'āmēt) *n.* [L. *filum*, thread.] A thread-like structure; the stalk of anther; a hypha, *q.v.*; stalk of a down-feather; a cryptoptile; slender apical end of egg-tube of insect ovary.

**filamentous** (filāmēn'tūs) *a.* [L. *filum*, thread.] Thread-like; having filaments; *appl.* form or margin of certain bacterial colonies.

**filial generation**,— $F_1$ , etc., *q.v.*

**filial regression**,—tendency of offspring of outstanding parentage to revert to average for species.

**filicauline** (fil'ikōl'īn) *a.* [L. *filum*, thread; *caulis*, stalk.] With a thread-like stem.

**filiciform** (fil'isifōrm), **filicoid** (fil'-

ikoid) *a.* [L. *filix*, fern; *forma*, shape; Gk. *eidos*, form.] Shaped like the frond of a fern; fern-like.

**filiform** (fil'ifōrm) *a.* [L. *filum*, thread; *forma*, shape.] Thread-like.

**filiform papillae**,—papillae on the tongue, ending in numerous minute slender processes.

**filigerous** (filij'ērūs) *a.* [L. *filum*, thread; *gerere*, to carry.] With thread-like outgrowths or flagella.

**Filippi's glands**,—paired glands with ducts conveying viscid secretion into silk ducts.

**fillet** (fil'ēt) *n.* [L. *filum*, thread.] Band of white matter in mid-brain and medulla oblongata; lemniscus.

**filoplume** (fil'öploom) *n.* [L. *filum*, thread; *pluma*, feather.] A delicate hair-like feather with long axis and a few free barbs at apex.

**filopodia** (fil'öpō'diā) *n. plu.* [L. *filum*, thread; Gk. *pous*, foot.] Protozoan thread-like pseudopodia.

**filose** (fi'lōs) *a.* [L. *filum*, thread.] Slender; thread-like; *appl.* pseudopodia of protozoa.

**filter-passers**,—organisms capable of passing through a filter which arrests bacteria; microhenads; viruses.

**filtration** (filtrā'shūn) *n.* [F. *filtrer*, to strain.] *Appl.* iridial angle of cornea; straining, as of lymph through capillary walls.

**filum terminale**,—the terminal thread, a slender grey filament, of the spinal cord.

**fimbria** (fim'briā) *n.* [L. *fimbria*, fringe.] Any fringe-like structure; a posterior prolongation of fornix to hippocampus; one of delicate processes fringing the mouth of tube or duct, as of oviduct, or of siphon of molluscs.

**fimbriated** (fim'briā'tēd) *a.* [L. *fimbria*, fringe.] Fringed at margin, as petals, tubes, ducts, antennae.

**fin** (fin) *n.* [A.S. *finn*, fin.] A fold of skin with fin-rays and skeletal supports, in most fishes.

**finials** (fin'ialz) *n. plu.* [L. *fnis*, end.]

The ossicles of the distal rami of crinoids, which do not branch again.

**fin-rays**,—horny supports of fins.

**fissilingual** (fis'ling'gwāl) *a.* [L. *fissus*, cleft; *lingua*, tongue.] With bifid tongue.

**fission** (fish'un) *n.* [L. *fissus*, cleft.] Cleavage of cells; division of a unicellular organism into two or more parts.

**fissiparous** (fisip'arūs) *a.* [L. *fissus*, cleft; *parere*, to beget.] Reproducing by fission.

**fissiped** (fis'ipēd) *n.* [L. *fissus*, cleft; *pes*, foot.] With cleft feet, that is, with digits of feet separated.

**fissirostral** (fis'irōs'trāl) *a.* [L. *fissus*, cleft; *rostrum*, beak.] With deeply-cleft beak.

**fissure** (fish-ūr) *n.* [L. *fissus*, cleft.] A cleft, deep groove, or furrow dividing an organ into lobes, or subdividing and separating certain areas of the lobes; sulcus.

**fistula** (fis'tulā) *a.* [L. *fistula*, pipe.] Pathological or artificial pipe-like opening; trachea, water-conducting vessel.

**fistular** (fis'tulār) *a.* [L. *fistula*, pipe.] Like a fistula; pipe-like; hollow, as stems of Umbelliferae.

**fix** (fiks) *v.* [L. *fixus*, fixed.] To kill, and preserve; to establish; to retain.

**fixation muscles**,—muscles which prevent disturbance of body equilibrium generally, and fix limbs in case of limb-movements.

**flabellate** (flābēl'āt) *a.* [L. *flabellare*, to fan.] Fan-shaped; *appl.* pectinate antennae with long processes.

**flagelliform** (flābēl'ifōrm) *a.* [L. *flagellum*, fan; *forma*, shape.] Fan-shaped.

**flagellinerved** (flābēl'inērvd) *a.* [L. *flagellum*, fan; *nervus*, sinew.] *Appl.* leaves with many radiating nerves.

**flagellum** (flābēl'ūm) *n.* [L. *flagellum*, fan.] Any fan-shaped organ or structure; distal exite of branchiopodan limb; epipodite of

certain crustacean limbs; terminal lobe of glossa in certain insects.

**flagellate** (flāj'ēlāt) *a.* [L. *flagellum*, whip.] Furnished with flagella; like a flagellum.

**flagelliform** (flājēl'ifōrm) *a.* [L. *flagellum*, whip; *forma*, shape.] Lash-like; like a flagellum.

**flagellula** (flājēl'ulā) *n.* [L. *flagellula*, *dim.* of *flagellum*, whip.] A flagellate zoospore or flagellispore.

**flagellum** (flājēl'ūm) *n.* [L. *flagellum*, whip.] The lash-like process of many Protista and of cells, as in choanocytes and certain male gametes; external structure on basal joint of chelicera of Pseudoscorpiones; distal part of antenna in some arthropods, as in Diptera; a long slender runner or creeping stem.

**flame cells**,—the terminal cells of branches of excretory system in many worms, with cavity continuous with lumen of duct, and containing a cilium or bunch of cilia, the motions of which give a flickering appearance similar to that of a flame; a pronephridiostome.

**flavedo** (flāvē'dō) *n.* [L. *flavus*, yellow.] Exocarp of hesperidium; *cf.* albedo.

**flavescent** (flāvēs'ēnt) *a.* [L. *flavescere*, to turn yellow.] Growing yellow.

**flavin** (flā'vīn) *n.* [L. *flavus*, yellow.] A water-soluble yellow pigment of cells; lyochrome.

**flavoxanthin** (flā'vōzān'thīn) *n.* [L. *flavus*, yellow; Gk. *xanthos*, yellow.] A yellow colouring matter in petals, as of Ranunculaceae;  $C_{40}H_{56}O_8$ .

**flex** (flēks) *v.* [L. *flectere*, to bend.] To bend; *appl.* movement of limbs.

**flexor** (flēk'sōr) *n.* [L. *flexus*, bent.] A muscle which bends a limb, or part, by its contraction.

**flexor plate**,—a median plate supporting praetarsus of insects, for attachment of tendon of claw flexor.

**flexuous** (flĕk'sūūs) *a.* [L. *flexus*, bent.] Curving in a zig-zag manner; flexuose.

**flexure** (flĕk'sūr) *n.* [L. *flexus*, bent.] A curve or bend; *appl.* curve in embryonic brain, curve of intestine.

**float** (flōt) *n.* [A.S. *floatan*, to float.] The pneumatophore of siphonophores; one of four tracheal sacs in aquatic larva of Culicidae; a large spongy mass serving as a float in some pteridophytes.

**floating ribs**,—ribs not uniting at their ventral end with the sternum.

**floccose** (flōk'ōs) *a.* [L. *floccus*, a lock of wool.] Covered with wool-like tufts; *appl.* bacterial growth.

**floccular** (flōk'ulār) *a.* [L. *floccus*, lock of wool.] *Pert.* the flocculus.

**flocculence** (flōk'ulēns) *n.* [L. *floccus*, lock of wool.] Adhesion in small flakes, as of a precipitate.

**flocculent** (flōk'ulēnt) *a.* [L. *floccus*, lock of wool.] Covered with a soft waxy substance giving appearance of wool; covered with small woolly tufts.

**flocculus** (flōk'ulūs) *n.* [L.L. *dim.* of L. *floccus*, lock of wool.] A small accessory lobe on each lateral lobe of the cerebellum; a posterior hairy tuft in some Hymenoptera.

**floccus** (flōk'ūs) *n.* [L. *floccus*, lock of wool.] The tuft of hair terminating a tail; downy plumage of young birds; mass of hyphal filaments in algae and fungi.

**flora** (flō'rā) *n.* [L. *flos*, flower.] The plants peculiar to a country, area, or period.

**floral** (flō'rāl) *n.* [L. *flos*, flower.] *Pert.* the flora of a country or area; *pert.* flowers.

**florescence** (flōrēs'ēns) *n.* [L. *florescere*, to begin to flower.] Bursting into bloom.

**floret** (flō'rēt) *n.* [L. *flos*, flower.] One of the small individual flowers of a composite flower; flower with lemma and palea, of grasses.

**floricome** (flō'rikōm) *n.* [L. *flos*, flower; *coma*, hair.] A form of branched hexaster spicule.

**florigen** (flō'rījēn) *n.* [L. *flos*, flower; *gignere*, to produce.] A plant substance which stimulates change in buds to flowering condition; flowering hormone.

**florigenic** (flō'rījē'nīk) *a.* [L. *flos*, flower; *gignere*, to produce.] *Appl.* principle originating in leaves which stimulates flowering.

**florula** (flō'rulā) *n.* [*Dim.* of *flora*.] Plant population of a small unit area, as of compost heap, etc.

**floscelle** (flōsēl') *n.* [L. *flosculus*, little flower.] Flower-like structure round the mouth, composed of five bourrelets and five phyllodes, in some echinoids.

**flosculus** (flōs'kulūs) *n.* [L. *flosculus*, little flower.] A small flower; a floret, *q.v.*

**floss** (flōs) *n.* [O.F. *flosche*, down.] A downy or silky substance; the loose pieces of silk in a cocoon.

**flower** (flow'ēr) *n.* [L. *flos*, flower.] The blossom of a plant, comprising generally sepals, petals, stamens, and pistil; a leafy shoot adapted for reproductive purposes.

**flowering glume**,—lemma, *q.v.*

**fluviatile** (flōo'viātīl) *a.* [L. *fluviatilis*, *pert.* river.] Growing in or near streams; inhabiting and developing in streams, *appl.* certain insect larvae; caused by rivers, *appl.* deposits.

**fluviomarine** (flōo'vīōmārēn') *a.* [L. *fluvius*, stream; *mare*, sea.] *Pert.* or inhabiting rivers and sea.

**fluvioterrestrial** (flōo'vīōtērēs'triāl) *a.* [L. *fluvius*, stream; *terra*, land.] Found in streams and in the land beside them.

**flux** (flüks) *n.* [L. *fluere*, to flow.] Term *appl.* species that are not yet stable.

**foetal** (fē'tāl) *a.* [L. *foetus*, offspring.] Embryonic; *pert.* a foetus.

**foetid glands**,—small sac-like glands which secrete an ill-smelling fluid, in Orthoptera.

**foetus** (fē'tūs) *n.* [L. *foetus*, offspring.] An embryo in egg or in uterus.

**foliaceous** (fō'liā'shūs) *a.* [*L. folium*, leaf.] Having the form or texture of a foliage leaf; thin and leaf-like.

**Foliar process** [*C. Folli* or *Folius*, Italian anatomist]. Anterior process of malleus; processus gracilis.

**foliar** (fō'liār) *a.* [*L. folium*, leaf.] *Pert.* or consisting of leaves.

**foliation** (fōliā'shūn) *n.* [*L. folium*, leaf.] The production of leaves; leafing.

**folic** (fō'lik) *a.* [*L. folium*, leaf.] *Appl.* acid obtained from spinach, and liver extract,  $C_{15}H_{15}O_8N_5$ , and existing in various forms, with haematopoietic and other effects; *e.g.* vitamins B<sub>c</sub>, B<sub>12</sub>, M, factors R and S, rhizopterin, etc.

**folicolous** (fōlik'ölūs) *a.* [*L. folium*, leaf; *colere*, to dwell.] Growing on leaves; *appl.* certain fungi and lichens.

**foliobranchiate** (fō'liōbrāng'kiāt) *a.* [*L. folium*, leaf; *branchiae*, gills.] Possessing leaf-like gills.

**foliolae** (fō'liölē) *n. plu.* [*L. folium*, *dim.*, leaf.] Leaf-like appendages of telum.

**foliolate** (fō'liölāt) *a.* [*L. folium*, *dim.*, leaf.] *Pert.*, having, or like, leaflets.

**foliole** (fō'liöl) *n.* [*L. folium*, *dim.*, leaf.] Small leaf-like organ or appendage; a leaflet, as of a compound leaf.

**foliose** (fō'liös) *a.* [*L. folium*, leaf.] With many leaves; leafy.

**folium** (fō'liūm) *n.* [*L. folium*, leaf.] A flattened structure in the cerebellum, expanding laterally into superior semilunar lobules.

**follicle** (fōl'ikl) *n.* [*L. folliculus*, small sac.] A capsular fruit which opens on one side only; cavity or sheath; an ovarian follicle; a hair follicle.

**follicles of Langerhans** [*P. Langerhans*, German anatomist]. Groups of cells in submucosa at junction of fore-gut and mid-gut of larval cyclostomes, secreting an insulin-like substance and being homologous to islets of Langerhans.

**follicle-stimulating hormone**, — a

gonadotrophic hormone, prolan A, which stimulates ovarian follicles and testis; symbol FSH.

**follicular** (fōlik'ulār), **folliculate** (fōlik'ulāt) *a.* [*L. folliculus*, small sac.] *Pert.*, like, or consisting of follicles; *appl.* an ovarian hormone.

**folliculose** (fōlik'ulōs) *a.* [*L. folliculus*, small sac.] Having follicles.

**fontanelle** (fōn'tänēl) *n.* [*F. fontanelle*, little fountain.] A gap or space between bones in the cranium, closed only by membrane; depression on head of termites.

**fonticulus** (fōntik'ulūs) *n.* [*L. fonticulus*, *dim.* of *fons*, fountain.] A fontanelle; depression at anterior end of sternum, the jugular notch.

**food-chain**,—sequence of organisms in which each is food of a later member of the sequence.

**food vacuole**,—a small vacuole containing fluid and food-particles, in endosarc of many Protista.

**foot** (foot) *n.* [*A.S. fot*, foot.] An embryonic structure in vascular cryptogams through which nourishment is obtained from prothallus; basal portion of sporophyte in mosses; an organ of locomotion, differing widely in different animals, from tube-foot of echinoderms, muscular foot of gastropods and other molluscs, tarsus of insects, to foot of vertebrates.

**foramen** (fōrā'mēn) *n.* [*L. foramen*, opening.] The opening through coats of ovule; any small perforation; aperture through a bone or membranous structure.

**foramen (occipitale) magnum**,—the opening in occipital region of skull through which passes the spinal cord.

**foramen of Monro** [*A. Monro* (primus), Scottish anatomist]. Interventricular foramen, passage between third and lateral ventricles; porta or foramen interventriculare.

**foramina**,—*plu.* of foramen.

**foraminate** (fōrām'ināt) *a.* [*L. foramen*, opening.] Pitted; having foramina or perforations.



- foraminiferous** (fōrām'īnif'ērūs) *a.* [L. *foramen*, opening; *ferre*, to carry.] Having foramina; containing shells of Foraminifera.
- forceps** (fōr'sēps) *n.* [L. *forceps*, tongs.] The clasper-shaped anal cercus of some insects; large fighting or seizing claw of crabs and lobsters; fibres of corpus callosum curving into frontal and occipital lobes.
- forcipate** (fōr'sipāt) *a.* [L. *forceps*, tongs.] Resembling forceps, or forked like forceps.
- forcipulate** (fōrsip'ulāt) *a.* [*Dim.* of L. *forceps*, tongs.] Shaped like a small forceps; *appl.* asteroid pedicellariae.
- fore-brain**,—prosencephalon, *q.v.*
- forespore**,—early stage in endospore formation, in bacteria.
- forfex** (fōr'fēks) *n.* [L. *forfex*, shears.] A pair of anal organs which open and shut transversely, occurring in certain insects.
- forficate** (fōr'fikāt) *a.* [L. *forfex*, shears.] Deeply notched.
- forma** (fōr'mā) *n.* [L. *forma*, shape.] Form; taxonomic unit consisting of individuals that differ from those of a larger unit by a single character; smallest category in botanical classification.
- formation** (fōrmā'shūn) *n.* [L. *forma*, shape.] Structure arising from an accumulation of deposits; the vegetation proper to a definite type of habitat; production.
- formative** (fōr'mātiv) *a.* [L. *forma*, shape.] Plastic; *appl.* matter which is living and developable.
- formicarian** (fōr'mikā'riān) *a.* [L. *formica*, ant.] *Pert.* ants; *appl.* plants which attract ants by means of sweet secretions.
- formicarium** (fōr'mikā'rīūm) *n.* [L. *formica*, ant.] Ants' nest, particularly an artificial arrangement for purposes of study; formicary.
- fornicated** (fōr'nīkāt'ēd) *a.* [L. *fornicatus*, vaulted.] Concave within, convex without; arched.
- fornix** (fōr'nīks) *n.* [L. *fornix*, vault.] An arched recess, as between eyelid and eye-ball, or between vagina and cervix uteri; an arched sheet of white longitudinal fibres beneath corpus callosum; scutum of Cheilostomata; one of arched scales in the orifice of some flowers.
- fossa** (fōs'ā) *n.* [L. *fossa*, ditch.] A pit or trench-like depression.
- fosse** (fōs) *n.* [L. *fossa*, ditch.] A fossa; a circular groove formed by upper part of parapet in sea-anemones.
- fossette** (fōsēt') *n.* [F. *fossette*, small pit, from L. *fossa*, ditch.] A small pit; a socket containing base of antennule in arthropods.
- fossil** (fōs'il) *n.* [L. *fossilis*, dug up.] Petrified animal or plant, or portion thereof, as found in rocks.
- fossiliferous** (fōs'ilif'ērūs) *a.* [L. *fossilis*, dug up; *ferre*, to carry.] Containing fossils.
- fossorial** (fōsō'riāl) *n.* [L. *fossor*, digger.] Adapted for digging; *appl.* animals, claws, feet.
- fossula** (fōs'ulā) *n.* [*Dim.* of L. *fossa*, ditch.] A small fossa; small pit with reduced septa on one side of a corallite cup in Rugosa.
- fossulate** (fōs'ulāt) *a.* [*Dim.* of L. *fossa*, ditch.] With slight hollows or grooves.
- fossulet** (fōs'ulēt) *n.* [*Dim.* of L. *fossa*, ditch.] A long narrow depression.
- fourchette** (fōrshēt') *n.* [F. *fourchette*, fork.] Frenulum of labia minora.
- fovea** (fō'vēā) *n.* [L. *fovea*, depression.] A small pit, fossa, or depression; a small hollow at leaf base in Isoetes, containing a sporangium; pollinium base in orchids.
- fovea centralis**,—central and thinnest part of macula lutea, without rods and with long and slender cones.
- fovea dentis**,—facet on atlas, for articulation with dens of axis.
- foveal** (fō'vēāl) *a.* [L. *fovea*, depression.] *Pert.* fovea; *pert.* fovea centralis; *appl.* cone vision. *Opp.* extrafoveal.

- foveate** (fō'veāt) *a.* [L. *fovea*, depression.] Pitted.
- foveola** (fōvē'olā) *n.* [L. *foveola*, small depression.] A small pit; a shallow cavity in bone; a small depression just above fovea in leaf of Isoetes.
- foveolae opticae**,—two pigmented areas in depressions of neural plate of amphibian embryo, the primordia of eyes.
- foveolate** (fōvē'olāt) *a.* [L. *foveola*, small depression.] Having regular small depressions.
- fragmentation** (frāg'méntā'shūn) *n.* [L. *frangere*, to break.] Division into small portions; nuclear division by simple splitting; amitosis.
- fraternal**,—dizygotic, *appl.* twins.
- free** (frē) *a.* [A.S. *freo*, acting at pleasure.] Motile; unattached; distinct; separate.
- free central placentation**,—axile placentation, fixation of ovules to central axis of ovary.
- free-martin**,—a sterile female twin-born with a male.
- frenate** (frē'nāt) *a.* [L. *frenare*, to bridle.] Having a frenum or frenulum.
- frenulum** (frēn'ulūm) *n.* [L. *frenulum*, *dim.* of *frenum*, bridle.] A fold of membrane, as of tongue, clitoris, etc.; a process on hind-wing of Lepidoptera for attachment to fore-wing; a thickening of sub-umbrella of certain Scyphomedusae.
- frenum** (frē'nūm) *n.* [L. *frenum*, bridle.] A frenulum; a fold of integument at junction of mantle and body of Cirripedia, ovigerous in Pedunculata; also fraenum.
- frigofuge** (frig'ōfūj) *n.* [L. *frigor*, cold; *fugere*, to flee.] An organism which does not tolerate cold.
- frond** (frōnd) *n.* [L. *frons*, leafy branch.] A leaf, especially of fern or palm; thallus of certain sea-weeds.
- frondescence** (frōndēs'ēns) *n.* [L. *frondescere*, to put forth leaves.] Development of leaves.
- frons** (frōnz) *n.* [L. *frons*, fore-head.] Forehead; or comparable structure.
- frontal** (frūn'tāl) *a.* [L. *frons*, forehead.] In region of forehead; *appl.* artery, vein, lobe, convolution; *appl.* head-organ of nemertines; a prostomial ridge of polychaetes; palps of certain nereids; specialised feeding surface in certain ciliates; ganglion, gland, and pore in insects.
- frontalis** (frōntā'lis) *n.* [L. *frons*, forehead.] Frontal part of the scalp muscle or epicranium.
- frontocerebellar fibres**,—fibres passing from frontal region to cerebellum.
- frontoclypeus** (frūn'tōklīp'ēūs) *n.* [L. *frons*, forehead; *clypeus*, shield.] Frons and clypeus fused, in insects.
- fronto-ethmoidal**,—*pert.* frontal and ethmoidal bones; *appl.* suture.
- frontonasal** (frūn'tōnā'zāl) *a.* [L. *frons*, forehead; *nasus*, nose.] *Pert.* forehead or frontal region and nose; *appl.* ducts and process.
- frontosphenoidal** (frūn'tōsfēnoid'āl) *a.* [L. *frons*, forehead; Gk. *sphen*, wedge; *eidos*, form.] *Pert.* frontal and sphenoid bones; *appl.* a process of zygomatic bone articulating with frontal.
- fructification** (frūk'tifikā'shūn) *n.* [L. *fructus*, fruit; *facere*, to make.] Fruit formation; any spore-producing structure in cryptogams.
- fructose** (frūk'tōs) *n.* [L. *fructus*, fruit.] Fruit-sugar; laevulose;  $C_6H_{12}O_6$ .
- frugivorous** (froojīv'ōrūs) *a.* [L. *frux*, fruit; *vorare*, to devour.] Fruit-eating; *appl.* certain animals.
- fruit** (froot) *n.* [F. *fruit*, from L. *fructus*, fruit.] The fertilised and developed ovary of a plant.
- fruit-body**,—the spore-bearing structure, as a sporangiocarp, basidiocarp, conidiocarp.
- fruit-spot**,—sorus, as of ferns.
- frustule** (frūs'tūl) *n.* [L. *frustulum*, small fragment.] The siliceous two-valved shell and protoplasm of a diatom.

**frutescent** (frootēs'ënt) *a.* [L. *frutex*, shrub.] Shrub-like; fruticose.

**frutex** (froot'ëks) *n.* [L. *frutex*, shrub.] Shrub.

**fruticose** (froot'ikōs) *a.* [L. *frutex*, shrub.] Like a shrub; *appl.* certain lichens.

**fruticulose** (frootik'ülōs) *a.* [L. *frutex*, shrub.] Like a small shrub.

**fulvorous** (fūsiv'örüs) *a.* [L. *fucus*, seaweed; *vorare*, to devour.] *Appl.* seaweed-eating animals.

**fucoid** (fū'koid) *a.* [L. *fucus*, seaweed; Gk. *eidos*, form.] *Pert.* or resembling seaweed.

**fucosan** (fū'kōsān) *n.* [L. *fucus*, seaweed.] Product of carbon-assimilation in brown seaweeds.

**fucoxanthin** (fū'kōzān'thīn) *n.* [L. *fucus*, seaweed; Gk. *xanthos*, yellow.] The main carotenoid pigment of brown algae;  $C_{40}H_{56}O_6$ .

**fugacious** (fūgā'shūs) *a.* [L. *fugax*, swift.] Evanescent; falling off early; caducous; *appl.* petals, etc.

**fulcral** (fūl'krāl) *a.* [L. *fulcrum*, support.] *Pert.* or acting as a fulcrum; *appl.* triangular plates aiding in movement of stylets in Hymenoptera.

**fulcrate** (fūl'krāt) *a.* [L. *fulcrum*, support.] Having a fulcrum.

**fulcrum** (fūl'krūm) *a.* [L. *fulcrum*, support.] A supporting organ such as a tendril or stipule; sporophore in lichens; plate supporting rami of incus in mastax of rotifers; the lower surface of a ligula; a chitinous structure in base of insect rostrum; hinge-line of brachiopods; spine-like scale on anterior fin-rays of many ganoids.

**function** (fūngk'shūn) *n.* [L. *functus*, performed.] The action proper to any organ or part.

**functional** (fūngk'shōnāl) *a.* [L. *functus*, performed.] Acting normally; acting or working part of an organ as distinct from remainder.

**fundament**,—primordium, *q.v.*

**fundamentum**,—hypocotyl, *q.v.*

**fundatrix** (fūn'dātriks) *n.* [L. *fundare*, to found.] Stem mother, a female founding a new colony by oviposition; *appl.* Aphides.

**fundiform** (fūn'difōrm) *a.* [L. *funda*, sling; *forma*, shape.] Looped; *appl.* a ligament of penis.

**fundus** (fūn'dūs) *n.* [L. *fundus*, bottom.] The base of an organ, as of stomach, urinary bladder, etc.; boundary between underground and above-ground portions of plant axis.

**fungicolous** (fūnjik'ölūs) *a.* [L. *fungus*, mushroom; *colere*, to inhabit.] Living in or on fungi.

**fungiform** (fūn'jifōrm) *a.* [L. *fungus*, mushroom; *forma*, shape.] Fungoid or shaped like a fungus; *appl.* tongue papillae.

**fungine** (fūn'jin) *n.* [L. *fungus*, mushroom.] Chitinous substance forming cell-wall of fungi.

**fungistatic** (fūn'jistāt'ik) *a.* [L. *fungus*, mushroom; Gk. *statikos*, causing to stand.] Inhibiting the development of fungi.

**fungivorous** (fūnjiv'örüs) *a.* [L. *fungus*, mushroom; *vorare*, to devour.] *Appl.* fungus-eating animals and plants.

**fungous** (fūng'gūs) *a.* [L. *fungus*, mushroom.] With character or consistency of fungus; fungoid.

**funicle** (fū'nīkl) *n.* [L. *funiculus*, small cord.] An ovule stalk; a slender strand attaching peridium to peridium; a small cord or band, as of nerve fibres; a large double strand of cells passing from aboral end of coelom to aboral wall of zoecium of Molluscoidea; also funiculus.

**funicular** (fūnik'ülār) *a.* [L. *funiculus*, small cord.] Consisting of a small cord or band; *pert.* a funiculus or funicle.

**funiculus** (fūnik'ülūs) *n.* [L. *funiculus*, small cord.] A funicle, *q.v.*; one of the ventral, lateral, and dorsal columns of white matter of the spinal cord.

**funnel** (fün'ël) *n.* [L. *funderc*, to pour.] Siphon of cephalopods.

**funnelform** (fün'ëlförm) *a.* [L. *funderc*, to pour; *forma*, shape.] Widening gradually from a narrow base; infundibuliform.

**furca** (fūr'kā) *n.* [L. *furca*, fork.] The apophysis or entothorax of insect metathorax; forked intercoxal plate, as in Copepoda.

**furcal** (fūr'kāl) *a.* [L. *furca*, fork.] Forked; *appl.* a branching nerve of lumbar plexus.

**furcasternum** (fūr'kästër'nüm) *n.* [L. *furca*, fork; *sternum*, breast-bone.] Forked poststernite or sternellum in many insects.

**furcate** (fūr'kāt) *a.* [L. *furca*, fork.] Branching like prongs of a fork.

**furciferous** (fursif'erüs) *a.* [L. *furca*, fork; *ferre*, to carry.] Bearing a forked appendage, as some insects.

**furcula** (fūr'külä) *n.* [L. *furcula*, *dim.* of *furca*, fork.] A forked process or structure; the merrythought bone; a transverse ridge in embryonic pharynx; partially fused abdominal appendages forming springing organ in Collembola.

**furred** (furd) *a.* [M.E. *furren*, sheath.] Having short decumbent hairs thickly covering the surface.

**fuscin** (fūs'sin) *n.* [L. *fuscus*, tawny.] A brown pigment in retinal epithelium.

**fuseau** (füzō) *n.* [F. *fuseau*, from L. *fuscus*, spindle.] A spindle-shaped structure; a spindle-shaped, thick-walled spore divided by septa, in certain fungi; a fusiform macroconidium.

**fusi** (fū'zi) *n. plu.* [L. *fuscus*, spindle.] In spiders, organs composed of two retractile processes which issue from mammulae and form threads.

**fusiform** (fū'ziförm) *a.* [L. *fuscus*, spindle; *forma*, shape.] Spindle-shaped; tapering gradually at both ends; *appl.* innermost layer of cerebral cortex; *appl.* a gyrus of temporal lobe.

**fusion-nucleus**,—central nucleus of embryo-sac formed by fusion of odd nuclei from each end.

**fusulae** (fū'zülē) *n. plu.* [*Dim.* of L. *fuscus*, spindle.] Spools, minute tubes of spinneret.

**galactase** (gäläk'täs) *n.* [Gk. *gala*, milk.] An enzyme, trypsin-like in action, found in milk.

**galactin** (gäläk'tin) *n.* [Gk. *gala*, milk.] The prepituitary lactogenic hormone, prolactin; a polysaccharide occurring in certain plants, *e.g.* in lupin.

**galactoblast** (gäläk'töbläst) *n.* [Gk. *gala*, milk; *blastos*, bud.] A fat-containing globule or colostrum corpuscle in mammary acini.

**galactophorous** (gäl'äktöf'örüs) *a.* [Gk. *gala*, milk; *pherein*, to carry.] Lactiferous; *appl.* ducts of mammary glands.

**galactosis** (gäl'äktö'sis) *n.* [Gk. *gala*, milk.] Milk secretion.

**galactotropic** (gäläk'tötröp'ik) *a.* [Gk. *gala*, milk; *trope*, turn.] Stimulating milk secretion; *appl.* hormone: prolactin, *q.v.*

**galbulus** (gäl'bülüs) *n.* [L. *galbulus*, cypress nut.] A modified cone with fleshy scales, as in cypress.

**galea** (gäl'ëä) *n.* [L. *galea*, helmet.] A helmet-shaped petal, or other similarly-shaped structure; epicranial aponeurosis, the galea aponeurotica, of the scalp muscle or occipitofrontalis; galea capitis, thin sheath covering head of spermatozoon; outer division of stipes or endopodite of first maxilla of insects, itself divided into basigalea and distigalea; a prominence of movable digit of chelicerae in Pseudoscorpiones.

**galeate** (gäl'ëät) *a.* [L. *galea*, helmet.] Helmet-shaped; hooded.

**Galen, veins of** [*Galen*, Greek physician]. Internal cerebral veins and great cerebral vein formed by their union.

**gall** (gôl) *n.* [A.S. *gealla*, gall.] Bile, secretion of liver. [L. *galla*, gall-nut.] An excrescence on plants, caused by fungi, mites, and insects,

- especially by Cynipidae and Cecidomyiidae.
- gall - bladder**, --- pear - shaped or spherical sac which stores bile.
- galloxanthin** (gālōzān'thīn) *n.* [L. *gallus*, cock; Gk. *xanthos*, yellow.] Carotenoid pigment associated with retinal cones in domestic fowl.
- galvanotaxis** (gāl'vānōtāk'sis), **galvanotropism** (gāl'vānōt'rōpizm) *n.* [L. *Galvani*, Italian physiologist]. Response or reaction to electrical stimulus.
- gametal** (gāmē'tāl) *a.* [Gk. *gametes*, spouse.] *Pert.* a gamete; reproductive.
- gametangium** (gām'ētān'jūm) *n.* [Gk. *gametes*, spouse; *angeion*, vessel.] A structure producing sexual cells.
- gametes** (gāmēs't) *n. plu.* [Gk. *gametes*, spouse.] Cells derived from gametocytes which conjugate and form zygotes; sexual cells.
- gametic** (gāmēt'ik) *a.* [Gk. *gametes*, spouse.] *Pert.* gamete; *appl.* a mutation occurring before maturation of gamete; *appl.* linkage.
- gametids** (gāmē'tidz) *n. plu.* [Gk. *gametes*, spouse.] Primary sporoblasts destined to become gametes.
- gametoblast** (gāmē'tōblāst) *n.* [Gk. *gametes*, spouse; *blastos*, bud.] Plasson; formulative substance.
- gametocyst** (gāmē'tōsist) *n.* [Gk. *gametes*, spouse; *kystis*, bladder.] Cyst surrounding two associated free forms in sexual reproduction of gregarines.
- gametocyte** (gāmē'tōsīt) *n.* [Gk. *gametes*, spouse; *kytos*, hollow.] The mother-cell of a gamete.
- gametogenesis** (gāmē'tōjēn'ēsīs) *n.* [Gk. *gametes*, spouse; *genesis*, origin.] Gamete formation; gametogeny.
- gametogenic** (gāmē'tōjēn'ik) *a.* [Gk. *gametes*, spouse; *genos*, descent.] Arising from spontaneous changes in chromosomes of gametes; *appl.* variation.
- gametogonium** (gāmē'tōgō'niūm) *n.* [Gk. *gametes*, spouse; *gonos*, offspring.] A cell producing a gamete, a gametocyte.
- gametoid** (gāmēt'oid) *n.* [Gk. *gametes*, spouse; *eidōs*, form.] A structure behaving like a gamete, as apocytes uniting to form a zygote.
- gametokinetic** (gāmē'tōkinēt'ik) *a.* [Gk. *gametes*, spouse; *kinein*, to move.] Stimulating gamete formation; *appl.* hormones, as follicle-stimulating hormone or prolactin.
- gametophore** (gāmē'tōfōr) *n.* [Gk. *gametes*, spouse; *pherein*, to bear.] A special part of a gametophyte on which gametangia are borne; a hyphal outgrowth which fuses with a similar neighbouring outgrowth to form a zygospore.
- gametophyll** (gāmē'tōfil) *n.* [Gk. *gametes*, spouse; *phyllon*, leaf.] A modified leaf bearing sexual organs; a micro- or macro-sporophyll.
- gametophyte** (gāmē'tōfit) *n.* [Gk. *gametes*, spouse; *phyton*, plant.] The gamete-forming phase in alternation of plant generations; haplophase; sexual generation of plants; pollen grain and embryo-sac; *cf.* sporophyte.
- gamic** (gām'ik) *a.* [Gk. *gamos*, marriage.] Fertilised.
- gammation** (gāmā'shūn) *n.* [Gk. *gammation*, *dim.* of *gamma*.] An angular bar beside the branchial arches of Palaeospondylus.
- gamobium** (gāmō'būm) *n.* [Gk. *gamos*, marriage; *bios*, life.] The sexual generation in alternation of generations; *opp.* agamobium.
- gamocyst** (gām'ōsist) *n.* [Gk. *gamos*, marriage; *kystis*, bladder.] Oocyst, or sporocyst.
- gamodeme** (gām'ōdēm) *n.* [Gk. *gamos*, marriage; *demos*, people.] A deme forming a relatively isolated inbreeding community.
- gamodesmic** (gām'ōdēs'mik) *a.* [Gk. *gamos*, marriage; *desma*, bond.] Having the vascular bundles fused together instead of separated by connective tissue.

**gamogastrous** (gām'ogās'trūs) *a.* [Gk. *gamos*, marriage; *gaster*, belly.] *Appl.* a pistil formed by union of ovaries, but with styles and stigmata free.

**gamogenesis** (gām'ōjēn'ēsis) *n.* [Gk. *gamos*, marriage; *genesis*, descent.] Sexual reproduction.

**gamogenetic** (gām'ōjēnēt'ik) *a.* [Gk. *gamos*, marriage; *genesis*, descent.] Sexual; reproduced from union of sex elements.

**gamogony** (gāmōg'ōnī) *n.* [Gk. *gamos*, marriage; *gone*, descent.] Sporogony in protozoa.

**gamont** (gāmōnt') *n.* [Gk. *gamos*, marriage; *on*, being.] A sporont.

**gamopetalous** (gām'ōpēt'ālūs) *a.* [Gk. *gamos*, marriage; *petalon*, petal.] With coherent petals; sympetalous.

**gamophase** (gām'ōfāz) *n.* [Gk. *gamos*, marriage; *phasis*, aspect.] The haploid phase of a life-cycle; haplophase; *cf.* zygothase.

**gamophyllous** (gām'ōfil'ūs) *a.* [Gk. *gamos*, marriage; *phyllon*, leaf.] With united perianth leaves; monophyllous.

**gamosepalous** (gām'ōsēp'ālūs) *a.* [Gk. *gamos*, marriage; *F. sépale*, sepal.] With coherent sepals; monosepalous.

**gamostele** (gām'ōstē'lē) *n.* [Gk. *gamos*, marriage; *stele*, pillar.] Stele formed from fusion of several steles.

**gamostelic** (gām'ōstē'lik) *a.* [Gk. *gamos*, marriage; *stele*, pillar.] *Appl.* condition in which steles of a polystelic stem are fused together.

**gamostely** (gām'ōstē'li) *n.* [Gk. *gamos*, marriage; *stele*, pillar.] The arrangement of polystelic stems when the separate steles are fused together surrounded by pericycle and endodermis.

**gamotropism** (gāmōt'rōpizm) *n.* [Gk. *gamos*, union; *tropē*, turn.] Tendency to mutual attraction, exhibited by movements of gametes.

**ganglia**,—*plu.* of ganglion.

**gangliar** (gāng'gliār) *a.* [Gk. *ganglion*, little tumour.] *Pert.* a ganglion or ganglia.

**gangliate** (gāng'gliāt) *a.* [Gk. *ganglion*, little tumour.] Having ganglia.

**gangliiform** (gāng'glifōrm) *a.* [Gk. *ganglion*, little tumour; *L. forma*, shape.] In the form of a ganglion.

**ganglioblast** (gāng'gliōblāst) *n.* [Gk. *ganglion*, little tumour; *blastos*, bud.] Mother-cell of gangliocyte.

**gangliocyte** (gāng'gliōsit) *n.* [Gk. *ganglion*, little tumour; *kytos*, hollow.] A ganglion cell outside the central nervous system.

**ganglioid** (gāng'glioid) *a.* [Gk. *ganglion*, little tumour; *eidos*, form.] Like a ganglion.

**ganglion** (gāng'gliōn) *n.* [Gk. *ganglion*, little tumour.] A mass of nerve cell bodies and giving origin to nerve fibres; a nerve centre.

**ganglionated** (gāng'gliōnā'tēd) *a.* [Gk. *ganglion*, little tumour.] Supplied with ganglia; gangliate.

**ganglioneural** (gāng'gliōnūrāl) *a.* [Gk. *ganglion*, little tumour; *neuron*, nerve.] *Appl.* a system of nerves, consisting of a series of ganglia connected by nerve strands.

**ganglioneuron** (gāng'gliōnūrōn) *n.* [Gk. *ganglion*, little tumour; *neuron*, nerve.] A nerve cell of a ganglion.

**ganglionic** (gāng'gliōn'ik) *a.* [Gk. *ganglion*, little tumour.] *Pert.*, consisting of, or in neighbourhood of a ganglion; *appl.* layer of retina, arteries, arterial system of brain.

**ganglioplexus** (gāng'gliōplēk'sūs) *n.* [Gk. *ganglion*, little tumour; *L. plexus*, braided.] A diffuse ganglion.

**ganoblast** (gān'ōblāst) *n.* [Gk. *ganos*, sheen; *blastos*, bud.] An ameloblast.

**ganoid** (gān'oid) *a.* [Gk. *ganos*, sheen; *eidos*, form.] *Appl.* scales of ganoid fishes, rhomboidal, joined like parquetry and consisting of a layer of bone with superficial enamel.

**ganoine** (gān'ōin) *n.* [Gk. *ganos*, sheen.] The outer layer of a ganoid scale, formed by the corium; enamel-like substance in formation of ameloblasts; ganoin.

**gape** (gāp) *n.* [A.S. *geapan*, to open wide.] The distance between the open jaws of birds, fishes, etc.

**garland cells**,—a chain of nephrocytes, in Diptera.

**gas gland**,—glandular portion of air-bladder of fishes.

**Gasserian ganglion** [*A. P. Gasser*, German anatomist]. The semilunar ganglion on sensory root of fifth cranial nerve.

**gastero**,—also *gastro*.

**gasteromycetous** (gās'tērōmīsē'tūs) *a.* [Gk. *gaster*, stomach; *mykes*, mushroom.] Having the spores developed in a gleba within a peridium.

**gastraea** (gāstrē'ā) *n.* [Gk. *gaster*, stomach.] A hypothetical gastrula-like animal; the ancestral metazoan, according to Haeckel.

**gastraeum** (gāstrē'ūm) *n.* [Gk. *gaster*, stomach.] Ventral side of body.

**gastral** (gās'trāl) *a.* [Gk. *gaster*, stomach.] *Pert.* stomach, as gastral cavity, cortex, layer, etc.

**gastralia** (gāstrā'liā) *n. plu.* [Gk. *gaster*, stomach.] Microscleres in the gastral membranes of Hexactinellida; abdominal ribs, as in some reptiles.

**gastric** (gās'trik) *a.* [Gk. *gaster*, stomach.] *Pert.* or in region of stomach; *appl.* arteries, glands, nerves, veins.

**gastrin** (gās'trīn) *n.* [Gk. *gaster*, stomach.] A hormone secreted by pyloric mucosa and which stimulates gastric secretion.

**gastro**,—also *gastero*.

**gastrocentrous** (gās'trōsēn'trūs) *a.* [Gk. *gaster*, stomach; *kentron*, centre.] *Appl.* vertebrae with centra formed by pairs of inter-ventralia, while the basiventralia are reduced.

**gastrocnemius** (gās'trōknē'miūs) *n.* [Gk. *gaster*, stomach; *kneme*, tibia.] Large muscle of calf of leg.

**gastrocoel** (gās'trōsēl) *n.* [Gk. *gaster*, stomach; *koilos*, hollow.] The archenteron of a gastrula.

**gastrocolic** (gās'trōkōl'ik) *a.* [Gk. *gaster*, stomach; *kolon*, gut.] *Pert.* stomach and colon; *appl.* ligament, the greater omentum.

**gastrocutaneous** (gās'trōkūtā'nēūs) *a.* [Gk. *gaster*, stomach; *L. cutis*, skin.] *Appl.* pores leading from intestine to surface in Hemichorda.

**gastrocystis** (gās'trōsīs'tis) *n.* [Gk. *gaster*, stomach; *kystis*, bladder.] Blastocyst.

**gastrodermis** (gās'trōdēr'mis) *n.* [Gk. *gaster*, stomach; *derma*, skin.] Enteroblast.

**gastroduodenal** (gās'trōdūdē'nāl) *a.* [Gk. *gaster*, stomach; *L. duodeni*, twelve each.] *Pert.* stomach and duodenum; *appl.* an artery.

**gastroepiploic** (gās'trōēpīplō'ik) *a.* [Gk. *gaster*, stomach; *epiploon*, omentum.] *Pert.* stomach and great omentum; *appl.* arteries, veins.

**gastrointestinal** (gās'trōintēs'tīnāl) *a.* [Gk. *gaster*, stomach; *L. intus*, within.] *Pert.* stomach and intestines.

**gastrolial** (gās'trōliē'nāl) *a.* [Gk. *gaster*, stomach; *L. lien*, spleen.] *Pert.* stomach and spleen; *appl.* ligament; gastrosplenic.

**gastrolith** (gās'trōlith) *n.* [Gk. *gaster*, stomach; *lithos*, stone.] A mass of calcareous matter found on each side of gizzard of crustaceans before a moult.

**gastroparietal** (gās'trōpāri'ētāl) *a.* [Gk. *gaster*, stomach; *L. paries*, wall.] *Pert.* stomach and body wall.

**gastrophrenic** (gās'trōfrēn'ik) *a.* [Gk. *gaster*, stomach; *phren*, midriff.] *Pert.* stomach and diaphragm; *appl.* ligament.

**gastropod** (gās'trōpōd) *n.* [Gk. *gaster*, stomach; *pous*, foot.] A mollusc with ventral muscular disc adapted for creeping; gasteropod.

**gastropores** (gās'trōpōrz) *n. plu.* [Gk. *gaster*, stomach; *poros*, channel.] The larger pores, for nutrient persons, of hydroid corals.

**gastropulmonary** (gās'trōpūl'mōnārī) *a.* [Gk. *gaster*, stomach; *L. pulmo*, lung.] *Pert.* stomach and lungs.

**gastrosplenic** (gās'trōsplēn'ik) *a.* [Gk. *gaster*, stomach; *splen*, spleen.] *Pert.* stomach and spleen; gastrolrenal.

**gastrostege** (gās'trōstēj) *n.* [Gk. *gaster*, stomach; *stege*, roof.] A ventral scale of snakes.

**gastrovascular** (gās'trōvās'kūlār) *a.* [Gk. *gaster*, stomach; L. *vasculum*, small vessel.] Serving both digestive and circulatory purposes, as canals of some Coelentera.

**gastrozoid** (gās'trōzō'oid) *n.* [Gk. *gaster*, stomach; *zoon*, animal; *eidos*, form.] In coelenterate colonies, the nutrient person with mouth and tentacles; trophozooid in some tunicates.

**gastrula** (gās'troolā) *n.* [Gk. *gaster*, stomach.] The cup- or basin-shaped structure formed by invagination of a blastula.

**gastrulation** (gās'troolā'shūn) *n.* [Gk. *gaster*, stomach.] Formation of gastrula from blastula by invagination.

**geitonogamy** (gī'tōnōg'āmī) *n.* [Gk. *geiton*, neighbour; *gamos*, marriage.] Fertilisation of a flower by another from the same plant.

**gelatigenous** (jēl'ātij'ēnūs) *a.* [L. *gelare*, to congeal; Gk. *-genes*, producing.] Gelatine-producing.

**gelatine** (jēl'ātin) *n.* [L. *gelare*, to congeal.] A jelly-like substance obtained from animal tissue.

**gelatinous** (jēlāt'inūs) *a.* [L. *gelare*, to congeal.] Jelly-like in consistency.

**geminat** (jēm'ināt) *a.* [L. *geminī*, twins.] Growing in pairs; binate; paired; *appl.* species or subspecies; corresponding forms in corresponding but separate regions, as reindeer and caribou.

**geminī** (jēm'inī) *n. plu.* [L. *geminī*, twins.] Bivalent chromosomes; pairs of paternal and maternal chromosomes at parasynesis.

**geminiflorous** (jēm'inīflō'rūs) *a.* [L. *geminī*, twins; *flos*, flower.] *Appl.* a plant whose flowers are arranged in pairs.

**gemma** (jēm'ā) *n.* [L. *gemma*, bud.] A bud or outgrowth of a plant

or animal which develops into a new organism; a leaf-bud, *opp.* flower-bud; a chlamydospore, *q.v.*; a hypothetical unit, *q.v.*

**gemmaeous** (jēmā'shūs) *a.* [L. *gemma*, bud.] *Pert.* gemmae or buds.

**gemma-cup**,—*cyathus*, *q.v.*

**gemmae** (jēm'āt) *a.* [L. *gemmae*, to bud.] Having buds.

**gemmaion** (jēmā'shūn) *n.* [L. *gemma*, bud.] Budding; bud-formation by means of which new independent individuals are developed in plants and animals; arrangement of buds.

**gemmaiferous** (jēmīf'ērūs) *a.* [L. *gemma*, bud; *ferre*, to bear.] Bud-bearing; gemmate.

**gemmaiform** (jēm'īfōrm) *a.* [L. *gemma*, bud; *forma*, shape.] Shaped like a bud; *appl.* pedicellariae of echinoderms.

**gemmaiparous** (jēmīp'ārūs) *a.* [L. *gemma*, bud; *parere*, to produce.] Reproducing by bud-formation.

**gemmaulation** (jēm'ūlā'shūn) *n.* [L. *gemma*, little bud.] Gemmule-formation.

**gemma** (jēm'ūl) *n.* [L. *gemma*, little bud.] A pangen; a moss bud; one of the internal buds of Porifera arising asexually and coming into activity on death of parent organism; one of the minute protoplasmic processes on branch of a dendrite, contact point in synapse.

**gena** (jē'nā) *n.* [L. *gena*, cheek.] The cheek or side part of head; antero-lateral part of prosoma of trilobites, and of insect head.

**genal** (jē'nāl) *a.* [L. *gena*, cheek.] *Pert.* the cheek; *appl.* facial suture of trilobites and angle of cheek.

**gene** (jēn) *n.* [Gk. *genos*, descent.] A unit hereditary factor in the chromosome; also gen; regarded as multiple, composed of genomeres.

**gene flow**,—the spreading of genes resulting from outcrossing and from subsequent crossing within a group; genorheithrum, *q.v.*

**gene mutation**,—a heritable variation caused by changes at a particular locus; point-mutation.



**genecology** (jĕn'ĕkōl'ōji) *n.* [Gk. *genos*, descent; *oikos*, household; *logos*, discourse.] Ecology in relation to genetics.

**Gené's organ** [C. G. Gené, Italian zoologist]. Subscutal or cephalic gland secreting a viscid substance used in transferring eggs to dorsal surface, in ticks.

**geneogenous** (jĕnĕōj'ĕnūs) *a.* [Gk. *genea*, birth; *gennaein*, to produce.] Congenital.

**geneology** (jĕn'ĕōl'ōji) *n.* [Gk. *genos*, descent; *logos*, discourse.] The study of development of individual and race; embryology and palaeontology combined.

**genera**,—*Plu.* of genus.

**generalised** (jĕn'ĕrālīz'd) *a.* [L. *generalis*, of one kind.] Combining characteristics of two or more groups, as in many fossils.

**generation** (jĕn'ĕrā'shūn) *n.* [L. *generatio*, reproduction.] Production; formation; the individuals of a species equally remote from a common ancestor.

**generative** (jĕn'ĕrātīv) *a.* [L. *generare*, to beget.] Concerned in reproduction; *appl.* smaller of two cells into which a pollen grain primarily divides.

**generative ferment**,—a specific substance, present in small quantities in blood, necessary for formation of gonadal internal secretions.

**generic** (jĕnĕr'īk) *a.* [L. *genus*, race.] Common to all species of a genus; *pert.* a genus.

**generitype** (jĕnĕr'ītīp) *n.* [L. *genus*, race; *typus*, image.] The typical species of a genus.

**genesiology** (jĕn'ĕsiōl'ōji) *n.* [Gk. *genesis*, descent; *logos*, discourse.] Science dealing with reproduction.

**genesis** (jĕn'ĕsis) *n.* [Gk. *genesis*, descent.] Formation, production, or development of a cell, organ, individual, or species.

**genetic** (jĕnĕ'tīk) *a.* [Gk. *genesis*, descent.] *Pert.* genesis; *pert.* genetics.

**genetic factor**,—gene, *q.v.*

**genetic spiral**,—in spiral phyllotaxis, imaginary spiral line following points of insertion of successive leaves.

**genetics** (jĕnĕt'īks) *n.* [Gk. *genesis*, descent.] That part of biology dealing with heredity and variation.

**genotype**,—genotype.

**genial** (jĕn'īāl) *a.* [Gk. *geneion*, chin.] *Pert.* the chin; *appl.* chin-plates of reptiles; *appl.* tubercles on inside of mandible, for insertion of genioglossal and geniohyoid muscles.

**genic** (jĕn'īk) *a.* [Gk. *genos*, descent.] *Pert.* genes.

**genic balance**,—harmonious interaction of genes.

**genicular** (jĕnik'ūlār) *a.* [L. *geniculum*, little knee.] *Pert.* region of the knee; *appl.* arteries, etc., *pert.* geniculum.

**geniculate** (jĕnik'ūlāt) *n.* [L. *geniculum*, little knee.] Bent like a knee-joint; *appl.* antenna; *pert.* geniculum, *appl.* a ganglion of the facial nerve; *appl.* bodies, lateral and medial corpora geniculata, constituting the metathalamus; having upper part of filament forming an angle more or less obtuse with lower.

**geniculum** (jĕnik'ūlūm) *a.* [L. *geniculum*, little knee.] Sharp bend in a nerve; part of the facial nerve in temporal bone where it turns abruptly towards stylo-mastoid foramen.

**genioglossal** (jĕnī'ōglōs'āl) *a.* [Gk. *geneion*, chin; *glossa*, tongue.] Connecting chin and tongue; *appl.* muscle; geniohyoglossal.

**geniohyoid** (jĕnī'ōhī'oid) *a.* [Gk. *geneion*, chin; *hyoides*, r-shaped.] *Pert.* chin and hyoid; *appl.* muscles.

**genital** (jĕn'ītāl) *a.* [L. *gignere*, to beget.] *Pert.* the region of reproductive organs; *appl.* corpuscles, glands, ridge, tubercle, etc.

**genitalia** (jĕn'ītālīā) *n. plu.* [L. *gignere*, to beget.] Genitals, the organs of reproduction, especially the external organs.

**genito-anal** (jĕn'itōā'nāl) *a.* [L. *gignere*, to beget; *anus*, vent.] In the region of genitalia and anus.

**genitocrural** (jĕn'itōkroo'rāl) *a.* [L. *gignere*, to beget; *crus*, leg.] In the region of genitalia and thigh; *appl.* a nerve originating from first and second lumbar nerves.

**genito-enteric** (jĕn'itōēntēr'ik) *a.* [L. *gignere*, to beget; Gk. *enteron*, gut.] *Pert.* genitalia and intestine.

**genitofemoral** (jĕn'itōfēm'orāl) *a.* [L. *gignere*, to beget; *femur*, thigh-bone.] Genitocrural.

**Gennari's band** [*F. Gennari*, Italian anatomist]. A layer of white fibres in middle cell-lamina of cerebral cortex, especially of occipital lobe; line of Gennari.

**genoblast** (jĕn'ōblāst) *n.* [Gk. *genos*, offspring; *blastos*, bud.] A mature germ-cell exclusively male or female.

**genoholotype** (jĕn'ōhōl'ōtip) *n.* [Gk. *genos*, race; *holos*, whole; *typos*, image.] A species defined as typical of its genus.

**genome** (jĕn'ōm) *n.* [Gk. *genos*, offspring.] Minimum group or set of chromosomes derived from a zygote or gamete; *genom*.

**genomere** (jĕn'ōmēr) *n.* [Gk. *genos*, offspring; *meros*, part.] A unit of a gene, regarded as a multiple.

**genonema** (jĕn'ōnē'mā) *n.* [Gk. *genos*, descent; *nema*, thread.] Axial thread on which genes are located in chromosome; axoneme; chromonema; a chromatid in its genetical aspect.

**genonomy** (jĕnōn'ōmī) *n.* [Gk. *genos*, descent; *nomos*, law.] The study of laws of relationships with reference to classification of organisms.

**genophenes** (jĕn'ōfēnz) *n. plu.* [Gk. *genos*, offspring; *phainein*, to appear.] Reaction types of the same genotype.

**genorheithrum** (jĕn'ōrē'thrūm) *n.* [Gk. *genos*, descent; *rheithron*, stream.] The passage or descent of genes in phylogenesis.

**genosome** (jĕn'ōsōm) *n.* [Gk. *genos*, descent; *soma*, body.] The part

of the chromosome bearing the locus of a gene.

**genospecies** (jĕn'ōspē'shēz) *n.* [Gk. *genos*, race; L. *species*, particular kind.] A species consisting of individuals having the same genotype.

**genosyntype** (jĕnōsīn'tip) *n.* [Gk. *genos*, race; *syn*, with; *typos*, image.] A series of species together defined as typical of their genus.

**genotype** (jĕn'ōtip) *n.* [Gk. *genos*, race; *typos*, image.] Genetic or factorial constitution of an individual; group of individuals possessing the same genetic constitution; biotype; genoplast; type species of a genus, *generype*.

**genotypic** (jĕn'ōtip'ik) *a.* [Gk. *genos*, race; *typos*, image.] *Pert.* genotype; *appl.* characters arising from hereditary endowment.

**genovariation**,—point mutation, *q.v.*

**genu** (jĕn'ū) *n.* [L. *genu*, knee.] A knee-like bend in an organ or part; anterior end of corpus callosum.

**genus** (jĕ'nūs) *n.*, **genera** (jĕn'ērā) *plu.* [L. *genus*, race.] A group of closely related species, in classification of plants or animals.

**genys** (jĕn'is) *n.* [Gk. *genys*, jaw.] Lower jaw.

**geobionts** (jĕ'ōbiōnts) *n. plu.* [Gk. *ge*, earth; *bion*, living.] Organisms permanently inhabiting the soil.

**geobios** (jĕ'ōbī'ōs) *n.* [Gk. *ge*, earth; *bios*, life.] Terrestrial life; edaphon, *q.v.*

**geoblast** (jĕ'ōblāst) *n.* [Gk. *ge*, earth; *blastos*, bud.] A germinating plumule of which the cotyledons remain underground.

**geocarpic** (jĕ'ōkār'pik) *a.* [Gk. *ge*, earth; *karpōs*, fruit.] Having the fruits maturing underground.

**geocryptophyte** (jĕ'ōkrip'tōfit) *n.* [Gk. *ge*, earth; *kryptos*, hidden; *phyton*, plant.] A plant with dormant parts underground; geophyte.

**geology** (jĕōl'ōji) *n.* [Gk. *ge*, earth; *logos*, discourse.] The science dealing with structure, activities, and history of the earth.

**geomalism** (jěom'ālizm) *n.* [Gk. *ge*, earth; *omalos*, level.] Response to the influence of gravitation; horizontal habitus.

**geonastic** (jěonās'tik) *a.* [Gk. *ge*, earth; *nastos*, pressed.] Curving towards the ground.

**geonemy** (jěon'ēmī) *n.* [Gk. *ge*, earth; *nemein*, to inhabit.] The geographical distribution of organisms; biogeography; chorology.

**geophilous** (jěōf'ilūs) *a.* [Gk. *ge*, earth; *philein*, to love.] Living in or on the earth.

**geophyte** (jě'ōfit) *n.* [Gk. *ge*, earth; *phyton*, plant.] A land plant; a plant with dormant parts (tubers, bulbs, rhizomes) underground.

**geosere** (jě'ōsēr) *n.* [Gk. *ge*, earth; *L. serere*, to put in a row.] A sere originating on a clay substratum.

**geotaxis** (jě'ōtāk'sis) *n.* [Gk. *ge*, earth; *taxis*, arrangement.] Locomotor response to gravity.

**geotonus** (jěōt'ōnūs) *n.* [Gk. *ge*, earth; *tonos*, tension.] Normal position in relation to gravity.

**geotropism** (jěōt'rōpizm) *n.* [Gk. *ge*, earth; *trope*, turn.] Tendency to respond to stimulus of gravity, usually positive, by turning downwards, as in growth of a root.

**gephyrocercal** (jěf'rōsēr'kāl, jěf'rōsēr'kāl) *a.* [Gk. *gephyra*, bridge; *kerkos*, tail.] *Appl.* secondary diphyrcercal caudal fin brought about by reduction of extreme tip of heterocercal or homocercal fin.

**geratology** (jě'rātōl'ōjī) *n.* [Gk. *geras*, old age; *logos*, discourse.] Study of the factors of decadence and old age of populations; *cf.* gerontology.

**germ** (jěrm) *n.* [L. *germen*, bud.] A unicellular micro-organism; a seed; a bud; a developing egg.

**germ band**,—primitive streak, of early embryo.

**germ-cell**,—a reproductive cell, *opp.* somatic cell; a primitive male or female element.

**germ-centre**,—an area of lymph-corpuscle division in nodules of lymph gland tissue.

**germ-disc**,—a small green cellular plate of the germ tube of liverworts; *cf.* germinal disc.

**germ-layer**,—an early differentiated layer of cells.

**germ nucleus**,—an egg or sperm nucleus.

**germ plasm**,—idioplasm, the physical basis of inheritance.

**germ pore**,—the exit pore of a germ tube in the spore integument.

**germ stock**,—stolon of tunicates.

**germ theory**,—biogenesis; the theory that living organisms can be produced or developed only from living organisms.

**germ track**,—lineage of zygote in developing organism; continuity of germ cells.

**germ tube**,—short filamentous tube put forth by a germinating spore.

**germ vitellarium**,—an organ, of platyhelminths, producing both ova and vitelline material.

**germ yolk gland**,—in some Rhabdocoelida, an embryonic structure consisting of fertile portion of egg and a sterile portion which functions as a yolk gland feeding the fertile portion.

**germarium** (jěrmā'riūm) *n.* [L. *germen*, bud.] An ovary; distal portion of an ovariole.

**germen** (jě'r'mēn) *n.* [L. *germen*, bud.] A mass of undifferentiated cells, the primary form of germ cells.

**germiduct** (jě'r'midūkt) *n.* [L. *germen*, bud; *ducere*, to lead.] Oviduct, of trematodes.

**germigen** (jě'r'mijēn) *n.* [L. *germen*, bud; *generare*, to beget.] Ovary, of trematodes.

**germinal** (jě'r'mīnāl) *a.* [L. *germen*, bud.] *Pert.* a seed, a germ-cell, or reproduction.

**germinal bands**,—two sets of rows of cells in early development of annulates.

**germinal cells**,—the cells concerned in reproduction, set apart early in embryonic life.

**germinal disc**,—the disc-like area of an egg yolk on which segmentation first appears; blastodisc.

**germinal epithelium**,—the layer of columnar epithelial cells covering the stroma of an ovary.

**germinal layers**,—primary layers of cells in a developing ovum: epiblast, hypoblast, and later, mesoblast; histogens, *q.v.*

**germinal lid**,—operculum of a pollen-grain.

**germinal spot**,—the nucleolus of an ovum.

**germinal vesicle**,—the nucleus of an ovum before formation of polar bodies.

**germination** (jër'minā'shūn) *n.* [L. *germen*, bud.] Beginning of growth; budding; sprouting; development.

**germination hormone**,—substance formed in endosperm of Gramineae and which stimulates growth of the coleoptile and inhibits that of the root; blastanin.

**germiparity** (jër'mipār'iti) *n.* [L. *germen*, bud; *parere*, to beget.] Reproduction by germ-formation.

**germogen** (jër'möjēn) *n.* [L. *germen*, bud; Gk. *genos*, offspring.] The central cell of gastrula-like phase, or infusorigen, in development of Rhombozoa; the residual nucleus, or unused portion, after formation of rhombogen by division of primary germogen or primitive central cell.

**gerontal** (jërōn'tāl) *a.* [Gk. *geron*, old man.] Senile.

**gerontic** (jërōn'tik) *a.* [Gk. *geron*, old man.] *Pert.* old age; gerontal; *appl.* stage in phylogeny.

**gerontology** (jër'ōntōl'ōji) *n.* [Gk. *geron*, old man; *logos*, discourse.] The study of senescence and senility; geratology, *q.v.*

**gestalt** (gěstält') *n.* [Ger. *Gestalt*, form.] Organised or unified response to an arrangement of stimuli; co-ordinated movements or configuration of motor reactions; a mental process considered as an organised pattern, involving explanation of parts in terms of the whole; a pattern considered in relation to background or environment; *appl.* morphology irrespective of taxonomic relationships.

**gestation** (jěstā'shūn) *n.* [L. *gestare*, to bear.] The intra-uterine period in development of an embryo.

**giant cells**,—large nerve-cells in annelids; myeloplaxes; osteoclasts, large multinuclear protoplasmic masses found in marrow, spleen; megakaryocytes, *q.v.*; Langhans' cells, *q.v.*; Betz cells, *q.v.*; gigantocytes.

**giant chromosomes**,—polytene or large chromosomes, as in salivary gland cells of larval Diptera.

**giant fibres**,—greatly enlarged and modified nerve-fibres running longitudinally through ventral nerve cord of some invertebrates.

**gibbous** (gīb'ūs) *a.* [L. *gibbus*, hump.] Inflated; saccate or pouched, as the lateral sepals of Cruciferae; gibbose.

**gigantocyte** (jigān'tōsīt) *n.* [Gk. *gigas*, giant; *kytos*, hollow.] Giant cell, *q.v.*

**gill** (gil) *n.* [M.E. *gille*, gill.] A plate-like or filamentous outgrowth; respiratory organ of aquatic animals; radial lamella on under side of pileus of agarics.

**gill arch**,—part of visceral skeleton in region of functional gills; branchial arch.

**gill basket**,—the branchial skeleton of lampreys, composed of continuous cartilage.

**gill book**,—the respiratory organ of certain Palaeostraca, consisting of a large number of leaf-like structures between which water circulates.

**gill cleft**,—a branchial cleft formed on side of pharynx.

**gill cover**,—an operculum.

**gill helix**,—a spirally coiled gill-like organ in certain Clupeidae.

**gill plume**,—the gill or ctenidium of the majority of Gasteropoda.

**gill pouch**,—an oval pouch containing gills and communicating directly or indirectly with exterior, as in Myxine and Petromyzon.

**gill rakers**,—small spine-like structures attached in a single or double row to branchial arches, preventing escape of food.

**gill remnants**,—epithelial, post-branchial, or suprapericardial bodies arising in pharynx of higher vertebrates.

**gill rods**,—gelatinous rods supporting the pharynx in Cephalochorda; branchial rays in certain fishes.

**gill slits**,—a series of perforations leading from pharynx to exterior, persistent in lower vertebrates, embryonic in higher.

**gingival** (jinji'vål) *a.* [L. *gingivae*, gums.] *Pert.* the gums.

**ginglymoid** (ging'glimoid) *a.* [Gk. *gingglymos*, hinge-joint; *eidos*, form.] Constructed like a hinge-joint.

**ginglymus** (ging'glimüs) *n.* [Gk. *gingglymos*, hinge-joint.] An articulation constructed to allow of motion in one plane only.

**Giraldès' organ** [J. A. C. C. *Giraldès*, Portuguese surgeon]. The paradidymis.

**girdle** (gër'dl) *n.* [A.S. *gyrdan*, to gird.] In appendicular skeleton, the supporting structure at shoulder and hip, each consisting typically of one dorsal and two ventral elements; transverse groove in Dinoflagellata, containing transverse flagellum and separating epicone and hypocone; the cingulum of diatoms.

**girdle bundles**,—leaf-trace bundles which girdle the stem and converge at the leaf insertion, as in Cycadales.

**girdle scar**,—a series of scale scars on axis of bud.

**gito**,—geito.

**gizzard** (giz'ård) *n.* [M.E. *gizer*, gizzard.] Muscular grinding chamber of alimentary canal of various animals; proventriculus of insects.

**glabella** (gläbël'ä) *n.* [L. *glaber*, bald.] The space on forehead between superciliary ridges; the elevated median region of cephalic shield of Trilobita.

**glabrate** (glä'brät) *a.* [L. *glaber*, smooth.] Becoming smooth; glabrescent; with a nearly smooth surface.

**glabrous** (glä'brüs) *a.* [L. *glaber*,

smooth.] With a smooth, even surface.

**glacial** (glä'siäl) *a.* [L. *glacies*, ice.] *Pert.* or *appl.* the Pleistocene epoch of the Quaternary period, characterised by periodic glaciation.

**gladiate** (gläd'iät) *a.* [L. *gladius*, sword.] Shaped like a sword; ensiform.

**gladiolus** (glädi'ölüs, glädiö'lüs) *n.* [L. *gladiolus*, small sword.] The mesosternum or corpus sterni.

**gladius** (gläd'iüs) *n.* [L. *gladius*, sword.] The pen or chitinous shell in Chondrophora; *cf.* phragmone, sepien.

**glairine** (glä'rën) *n.* [F. *glaire*, white of egg.] Glairy film found on thermal springs and formed by pectic zoogloea.

**gland** (gländ) *n.* [L. *glans*, acorn.] Single cell or mass of cells specialised for elaboration of secretions either for use in the body or for excretion; glans.

**gland cell**,—an isolated secreting cell; a cell of glandular epithelium.

**glandula** (glän'dülä) *n.* [L. *glandula*, small acorn.] A gland; a glutinous gland subserving cohesion of pollinia; arachnoid granulation on outer surface of dura mater.

**glandula vesiculosa**,—seminal vesicle.

**glandulae Pacchionii**,—arachnoidal granulations or Pacchionian bodies, *q.v.*

**glandular** (glän'dülär) *a.* [L. *glandula*, small acorn.] *Pert.* a gland; with secreting function.

**glandular epithelium**,—the tissue of glands, composed of polyhedral, columnar, or cubical cells whose protoplasm contains or elaborates the material to be secreted.

**glandular tissue**,—tissue of single or massed cells, parenchymatous and filled with granular protoplasm, adapted for secretion of aromatic substances in plants.

**glandulose - serrate** (glän'dülös-sër'ät) *a.* [L. *glandula*, small acorn; *serratus*, sawn.] Having the serrations tipped with glands.

**glans** (glāns) *n.* [L. *glans*, acorn.]

A nut; a hard, dry, indehiscent uncelled fruit, as an acorn; a gland; the glans penis; the glans clitoridis.

**Glaserian fissure** [*J. H. Glaser*, Swiss anatomist]. Petrotympenic fissure.

**glaucouscent** (glōsēs'ēnt) *a.* [L. *glau-cus*, sea-green.] Somewhat glaucous.

**glaucous** (glōk'ūs) *a.* [L. *glau-cus*, sea-green.] Bluish green; covered with a pale green bloom.

**gleba** (glē'bā) *n.* [L. *gleba*, clod.] The central part of the sporophore in certain fungi; the spore-forming apparatus in certain plants.

**glebula** (glē'būlā) *n.* [L. *glebula*, small clod.] A small prominence on a lichen thallus.

**glenohumeral** (glē'nōhū'mērāl) *a.* [Gk. *glene*, socket; L. *humerus*, humerus.] *Pert.* glenoid cavity and humerus; *appl.* ligaments.

**glenoid** (glē'noid) *a.* [Gk. *glene*, socket; *eidos*, form.] Like a socket; *appl.* cavity into which head of humerus fits, the mandibular fossa, and various ligaments.

**glenoidal labrum**,—a fibro-cartilaginous rim attached round the margin of glenoid cavity and of acetabulum.

**glia** (glē'ā, glī'ā) *n.* [Gk. *glia*, glue.] Gliocyte; neuroglia cell, a supporting cell of nervous tissue.

**gliadin** (glī'ādīn) *n.* [Gk. *glia*, glue.] A substance interacting with glutenin to form gluten in cereals; the prolamine of wheat and rye seeds; formerly, any prolamine.

**gliding growth**,—*see* sliding growth.

**gliosomes** (glī'ōsōmz) *n. plu.* [Gk. *glia*, glue; *soma*, body.] Granules in protoplasm of neuroglia, possibly in relation with mitochondria.

**Glisson's capsule** [*F. Glisson*, English physician]. A fibrous capsule within liver, enclosing hepatic artery, portal vein, lymphatic vessels, and bile duct.

**globate** (glō'bāt) *a.* [L. *globus*, globe.] Globe-shaped; globular.

**globigerina ooze**,—sea-bottom mud which is largely composed of shells of Foraminifera.

**globin** (glō'bīn) *n.* [L. *globus*, globe.]

The basic protein constituent of haemoglobin.

**globoid** (glō'boid) *n.* [L. *globus*, globe; Gk. *eidos*, form.] A spherical body in aleurone grains, a double phosphate of calcium and magnesium.

**globose** (glōbōs') *a.* [L. *globus*, globe.] Spherical or globe-shaped; globular.

**globule** (glōb'ūl) *n.* [L. *globulus*, small globe.] Any minute spherical structure; the antheridium of Characeae; globulus.

**globulin** (glōb'ūlīn) *n.* [L. *globus*, globe.] A protein, insoluble in water, such as fibrinogen, vitellin, crystallin, legumin.

**globulose** (glōb'ūlōs) *a.* [L. *globus*, globe.] Spherical; consisting of, or containing globules.

**globulus** (glōb'ūlūs) *n.* [L. *globulus*, small globe.] A globule; spherical or club-shaped sensory organ at bifurcation of antenna in Pauro-poda.

**globus major and minor**,—head and tail of epididymis.

**globus pallidus**,—part of lentiform nucleus of corpus striatum.

**glochidiate** (glōkīd'īāt) *a.* [Gk. *glochis*, arrow-point.] Furnished with barbed hairs.

**glochidium** (glōkīd'īūm) *n.* [Gk. *glochis*, arrow-point; *idion*, *dim.*] Hairs bearing barbed processes seen on massulae of certain rhizocarps; the larva of fresh-water mussels such as Unio and Anodon.

**gloea** (glē'ā) *n.* [Gk. *gloia*, glue.] An adhesive secretion of some protozoa.

**gloeocystidium** (glē'ōsīstīd'īūm) *n.* [Gk. *gloios*, sticky; *kystis*, bag; *idion*, *dim.*] A cystidium containing a slimy or oily substance.

**glomera carotica**,—carotid bodies, *q.v.*

**glomerular** (glōmēr'ulār) *a.* [L. *glomus*, ball.] *Pert.* or like a glomerulus.

**glomerulate** (glōmēr'ulāt) *a.* [L. *glomus*, ball.] Arranged in clusters.

**glomerule** (glöm'ērül) *n.* [L. *glomus*, ball.] A condensed cyme of almost sessile flowers; a compact cluster.

**glomeruliferous** (glömēr'ulif'ērūs) *a.* [L. *glomus*, ball; *ferre*, to carry.] Having the flowers arranged in glomerules.

**glomerulus** (glömēr'ülūs) *n.* [L. *glomus*, ball.] Network of capillary blood-vessels; inturned portion of a Bowman's capsule; oval body terminating olfactory fibres in rhinencephalon; a mass of interlacing intracapsular dendrites, in sympathetic ganglia; a glomerule.

**glomus** (glō'mūs) *n.* [L. *glomus*, ball.] A number of glomeruli run together; coccygeal and carotid bodies, consisting largely of chromaffin cells.

**glossa** (glōs'ā) *n.* [Gk. *glossa*, tongue.] A tongue-like projection in middle of labium of insects.

**glossal** (glōs'āl) *a.* [Gk. *glossa*, tongue.] *Pert.* the tongue.

**glossarium** (glōsā'riūm) *n.* [Gk. *glossa*, tongue.] The slender-pointed glossa of certain Diptera.

**glossate** (glōs'āt) *a.* [Gk. *glossa*, tongue.] Having a tongue or tongue-like structure.

**glossa-epiglottic** (glōs'ōēpiglōt'ik) *a.* [Gk. *glossa*, tongue; *epi*, upon; *glotta*, tongue.] *Pert.* tongue and epiglottis; *appl.* folds of mucous membrane.

**glossohyal** (glōs'ōhī'āl) *n.* [Gk. *glossa*, tongue; *hyooides*, T-shaped.] Median basihyal of fishes; entoglossum.

**glossa-kinaesthetic area**,—a brain area in Broca's convolution immediately connected with speech.

**glossopalatine** (glōs'ōpāl'ātin) *a.* [Gk. *glossa*, tongue; L. *palatus*, palate.] Connecting tongue and soft palate; *appl.* arch, muscle.

**glossophagine** (glōsōf'ājīn) *a.* [Gk. *glossa*, tongue; *phagein*, to eat.] Securing food by means of the tongue.

**glossopharyngeal** (glōs'ōfārin'jēāl) *a.* [Gk. *glossa*, tongue; *pharynx*,

gullet.] *Pert.* pharynx and gullet; *appl.* ninth cranial nerve.

**glossopodium** (glōs'ōpō'diūm) *n.* [Gk. *glossa*, tongue; *pous*, foot.] The sheathing leaf-base of Isoetes.

**glossotheca** (glōs'ōthē'kā) *n.* [Gk. *glossa*, tongue; *theke*, box.] The proboscis-covering part of pupal integument of insects.

**glottis** (glōt'is) *n.* [Gk. *glotta*, tongue.] The opening into the windpipe.

**glucase** (glook'ās) *n.* [Gk. *glykys*, sweet.] A plant enzyme which produces grape sugar from maltose.

**glucokinin** (glook'ōki'nin) *n.* [Gk. *glykys*, sweet; *kinein*, to move.] A plant substance capable of reducing blood-sugar.

**glucoproteins**,—see glycoproteins.

**glucose** (glook'ōs) *n.* [Gk. *glykys*, sweet.] The grape sugar of plants and animals; dextrose,  $C_6H_{12}O_6$ .

**gluma** (glōom'ā) *n.* [L. *gluma*, husk.] A bract at base of a grass inflorescence or spikelet; a chaffy or membranous bract; glume.

**glumaceous** (glōomā'shūs) *a.* [L. *gluma*, husk.] Dry and scaly like glumes; formed of glumes.

**glume**,—*gluma*, *q.v.*; lemma, *q.v.*

**glumiferous** (glōomif'ērūs) *a.* [L. *gluma*, husk; *ferre*, to bear.] Bearing or producing glumes.

**glumiflorous** (glōom'iflō'rūs) *a.* [L. *gluma*, husk; *flos*, flower.] Having flowers with glumes or bracts at their bases.

**glutaeal** (glootē'āl) *a.* [Gk. *gloutos*, buttock.] *Pert.* or in region of buttocks; *appl.* arteries, muscles, nerves, tuberosity, veins.

**glutaeus** (glootē'ūs) *n.* [Gk. *gloutos*, buttock.] A muscle of the buttock.

**glutathione** (gloot'āthi'ōn) *n.* [L. *gluten*, glue; Gk. *theion*, sulphur.] A sulphur-containing tri-peptide found in different tissues and capable of being alternately reduced and oxidised;  $C_{10}H_{17}O_6N_3S$ .

**gluten** (gloot'ēn) *n.* [L. *gluten*, glue.] A nitrogenous substance obtainable from some cereals, a product of gliadin and glutenin.

**glutenin** (gloot'ēnīn) *n.* [L. *gluten*, glue.] A substance of cereals interacting with gliadin to form gluten.

**glutinous** (gloot'īnūs) *a.* [L. *gluten*, glue.] Having a sticky or adhesive surface.

**glycerin** (glis'ērīn), **glycerol** (glis'ērōl) *n.* [Gk. *glykys*, sweet.] The sweet principle of natural fats and oils;  $C_3H_5(OH)_3$ .

**glycogen** (gli'kōjēn) *n.* [Gk. *glykys*, sweet.] A carbohydrate storage product of plants and animals,  $(C_6H_{10}O_5)_x$ ; animal starch.

**glycogenase** (gli'kōjēnās') *n.* [Gk. *glykys*, sweet; *-genes*, producing.] An enzyme which causes synthesis of storage glycogen in liver.

**glycolysis** (gli'kōl'īsis) *n.* [Gk. *glykys*, sweet; *lyein*, to loosen.] Decomposition of glucose or of glycogen, by hydrolysis.

**glycophyte** (gli'kōfīt) *n.* [Gk. *glykys*, sweet; *phyton*, plant.] A plant unable to thrive on substratum containing more than 0.5 per cent. sodium chloride in solution; *opp.* halophyte.

**glycoproteins** (gli'kōprō'tēinz) *n. plu.* [Gk. *glykys*, sweet; *protos*, first.] Compounds of protein with a carbohydrate, including mucins and mucoids; mucoproteins.

**glycosecretory** (gli'kōsēkrē'tōrī) *a.* [Gk. *glykys*, sweet; L. *secretus*, set apart.] Connected with the secretion of glycogen.

**glycotropic** (gli'kōtrōp'īk) *a.* [Gk. *glykys*, sweet; *trope*, turn.] *Appl.* factor secreted by prepituitary and which inhibits peripheral action of insulin; glycotrophic.

**gnathic** (nāth'īk) *a.* [Gk. *gnathos*, jaw.] *Pert.* the jaw; gnathal.

**gnathion** (nāth'īōn) *n.* [Gk. *gnathos*, jaw.] Lowest point of the median line of the lower jaw.

**gnathism** (nāth'īzm) *n.* [Gk. *gnathos*, jaw.] Formation of jaw with reference to degree of projection.

**gnathites** (nāth'īts) *n. plu.* [Gk. *gnathos*, jaw.] The buccal appendages of arthropods.

**gnathobase** (nāth'ōbās) *n.* [Gk. *gnathos*, jaw; *basis*, base.] An inwardly turned masticatory process on protopodite of appendages near mouth of Crustacea.

**gnathochilarium** (nāth'ōkilā'rīūm) *n.* [Gk. *gnathos*, jaw; *cheilos*, lip.] First maxillae and sternal plate in Pauropoda, united in Diplopoda.

**gnathopod** (nāth'ōpōd) *n.* [Gk. *gnathos*, jaw; *pous*, foot.] Any crustacean limb in oral region modified to assist with food.

**gnathopodite** (nāth'ōpōdīt) *n.* [Gk. *gnathos*, jaw; *pous*, foot.] A maxilliped of an arthropod.

**gnathos** (nā'thōs) *n.* [Gk. *gnathos*, jaw.] A median sclerite on ventral side of ninth tergum in Lepidoptera.

**gnathosoma** (nāth'ōsō'mā) *n.* [Gk. *gnathos*, jaw; *soma*, body.] The mouth region, including oral appendages, of Acarina.

**gnathostegites** (nāthōs'tējīts) *n. plu.* [Gk. *gnathos*, jaw; *stēge*, roof.] Pair of covering plates for mouth parts of some crustaceans.

**gnathostomatous** (nāth'ōstōm'ātūs) *a.* [Gk. *gnathos*, jaw; *stoma*, mouth.] With jaws at the mouth.

**gnathotheca** (nāth'ōthē'kā) *n.* [Gk. *gnathos*, jaw; *thēke*, case.] The horny outer covering of a bird's lower jaw.

**gnathothorax** (nāth'ōthō'rāks) *n.* [Gk. *gnathos*, jaw; *thorax*, chest.] The part of the cephalothorax posterior to protocephalon, in Malacostraca.

**gnesiogamy** (nēs'siōg'āmī) *n.* [Gk. *gnesios*, lawful; *gamos*, marriage.] Fertilisation by an individual of the same species; intraspecific zygois.

**goblet cells**,—mucus-secreting cells of columnar epithelia; chalice cells.

**Golgi apparatus or complex** [C. Golgi, Italian histologist]. Cell-constituents, localised or diffuse, often consisting of separate elements, the Golgi bodies, batonettes, dictyosomes or pseudochromosomes, containing lipoprotein, and concerned with cellular synthesis and secretion; originally apparatus



reticolare, canalicular system, internal reticular apparatus, the reticulum being possibly an artefact.

**Golgi, organs of**,—Golgi-Mazzoni corpuscles.

**Golgi-Mazzoni corpuscles** [*C. Golgi* and *V. Mazzoni*, Italian histologists]. Cylindrical end-organs or small Pacinian corpuscles at junction of tendon and muscle.

**golgiokinesis** (göl'jökínē'sis) *n.* [*C. Golgi*; Gk. *kinesis*, movement.] Division of the Golgi apparatus during mitosis.

**golgiosomes** (göl'jēösōmz) *n. plu.* [*C. Golgi*; Gk. *soma*, body.] Golgi bodies or material produced by division of the Golgi apparatus during mitosis.

**gomphosis** (gömfō'sis) *n.* [Gk. *gomphos*, bolt.] Articulation by insertion of a conical process into a socket, as of roots of teeth into alveoli.

**gonad** (gön'äd) *n.* [Gk. *gone*, birth.] A sexual gland, either ovary, or testes, or ovotestis.

**gonadectomy** (gön'ädëk'tōmī) *n.* [Gk. *gone*, birth; *ek*, out; *tome*, cutting.] Excision of gonad, castration in the male, spaying in female.

**gonadin** (gönā'din) *n.* [Gk. *gone*, birth.] Active principle of sex glands controlling secondary sexual characteristics.

**gonadotrophins** (gönädöt'röfinz) *n. plu.* [Gk. *gone*, birth; *trephein*, to nourish.] Two prepituitary hormones: 1. Follicle-stimulating hormone or prolan A; gametogenetic or gametokinetic hormones; thy-lakentrin. 2. Luteinising or interstitial-cell-stimulating hormone; prolan B; metakentrin. Chorionic gonadotrophin secreted by chorionic cells of placenta and excreted in pregnancy urine, resembling but not identical with luteinising hormone. Serum gonadotrophins: follicle-stimulating hormone in blood of pregnant mares, luteinising hormone in that of women.

**gonadotropic** (gön'ädöt'röp'ik) *a.* [Gk. *gone*, birth; *trope*, turn.]

Affecting the gonad; *appl.* pre-pituitary hormones and certain hormones obtained from urine and other body fluids and tissues, particularly during pregnancy; *appl.* effects; gonadotrophic.

**gonadotropin** (gön'ädöt'röpin) *n.* [Gk. *gone*, birth; *trope*, turn.] Any gonadotropic hormone or substance.

**gonaduct** (gön'ädükt) *n.* [Gk. *gone*, birth; L. *ductus*, led.] Gonoduct.

**gonal** (gön'al) *n.* [Gk. *gone*, birth.] *Appl.* middle portion of genital ridge which alone forms functional gonad; gonidial, *q.v.*

**gonangium** (gönän'jiüm) *n.* [Gk. *gone*, birth; *anggeion*, vessel.] A gonotheca; a dilated cup of perisarc protecting the blastostyle of Calyptoblastea.

**gonapophyses** (gön'äpöf'isēz) *n. plu.* [Gk. *gone*, birth; *apo*, from; *phyein*, to grow.] Chitinous out-growths or valves subserving copulation in insects; the component parts of a sting.

**gone** (gön'ē) *n.* [Gk. *gone*, generation.] One of four daughter cells of an auxocyte; the generative portion of a gonad; an organism possessing a gone. *v.* To produce a gone.

**gongylidia** (göng'gilid'ia) *n. plu.* [Gk. *gongylos*, round; *idion*, *dim.*] Hyphal swellings or modifications in fungi cultivated by certain ants.

**gonia** (gō'nia) *n. plu.* [Gk. *gone*, seed.] Primitive sex cells, spermatogonia or oogonia.

**goniale** (gōniā'lē) *n.* [Gk. *gonia*, angle.] In some vertebrates a bone of lower jaw beside articular.

**gonic** (gön'ik) *a.* [Gk. *gone*, generation.] *Pert.* gonies; *pert.* semen.

**gonidangium** (gön'idän'jiüm) *n.* [Gk. *dim.* of *gone*, seed; *anggeion*, vessel.] A structure producing or containing gonidia.

**gonidia** (gönid'ia) *n. plu.* [Gk. *dim.* of *gone*, seed.] Minute reproductive bodies of many bacteria; asexual non-motile reproductive cells produced upon gametophytes; algal constituents of lichens. *Sing.* gonidium.

**gonidial** (gōnīd'īāl) *a.* [Gk. *dim.* of *gone*, seed.] *Pert.* gonidia.

**gonidiferous** (gōnīdīf'ērūs) *a.* [Gk. *dim.* of *gone*, seed; *L. ferre*, to carry.] Bearing or producing gonidia.

**gonidium** (gōn'īdīm'īūm) *n.* [L.L. *dim.* of Gk. *gone*, seed.] A gonidial structure smaller than a gonidium and larger than a gonimium.

**gonidiogenous** (gōnīd'īōj'ēnūs) *a.* [Gk. *dim.* of *gone*, seed; *-genes*, producing.] Bearing or producing gonidia; gonidiferous.

**gonidioid** (gōnīd'īoid) *a.* [Gk. *dim.* of *gone*, seed; *eidōs*, form.] Like a gonidium; *appl.* certain algae.

**gonidiophore** (gōnīd'īōfōr) *n.* [Gk. *dim.* of *gone*, seed; *pherein*, to bear.] An aerial hypha supporting a gonidangium.

**gonidiophyll** (gōnīd'īōfīl) *n.* [Gk. *dim.* of *gone*, seed; *phyllon*, leaf.] A gametophyte leaf bearing gonidia.

**gonidium**,—*sing.* of gonidia.

**gonimium** (gōnīm'īūm) *n.* [Gk. *gonimos*, productive.] One of the bluish-green gonidia of certain lichens.

**gonimoblasts** (gōn'īmōblāsts) *n. plu.* [Gk. *gonimos*, productive; *blastos*, bud.] Filamentous outgrowths of a fertilised carpogonium of certain algae.

**gonimolobe** (gōn'īmōlōb) *n.* [Gk. *gonimos*, productive; *lobos*, lobe.] A group of carposporangia borne on a gonimoblast.

**gonion** (gōn'īōn) *n.* [Gk. *gonia*, angle.] The angle point on the lower jaw.

**gonoblast** (gōn'ōblāst) *n.* [Gk. *gonos*, offspring; *blastos*, bud.] A reproductive cell in animals.

**gonoblastid** (gōn'ōblāst'īd) *n.* [Gk. *gonos*, offspring; *blastos*, bud; *idion*, *dim.*] A blastostyle of Hydrozoa; gonoblastidium.

**gonocalyx** (gōn'ōkā'lik) *n.* [Gk. *gonos*, offspring; *kalyx*, cup.] The bell of a medusiform gonophore.

**gonocheme** (gōn'ōkēm) *n.* [Gk. *gonos*, offspring; *ochema*, support.] A medusoid bearing sex-cells, in Hydrozoa.

**gonochorism** (gōn'ōkō'rīzm) *n.* [Gk. *gonos*, offspring; *chorismos*, separation.] The history or development of sex differentiation; sex determination; dioecism.

**gonochoristic** (gōn'ōkōrīs'tik) *a.* [Gk. *gonos*, offspring; *choristos*, separated.] Having the sexes separate; producing distinct males and females; dioecious.

**gonocoel** (gōn'ōsēl) *n.* [Gk. *gone*, seed; *kōilos*, hollow.] The cavity containing the gonads.

**gonocytes** (gōn'ōsīts) *n. plu.* [Gk. *gone*, seed; *kytos*, hollow.] Sexual cells of sponges; mother-cells of ova and spermatozoa.

**gonodendron** (gōn'ōdēn'drōn) *n.* [Gk. *gonos*, offspring; *dendron*, tree.] A branching blastostyle in Physalia.

**gonoduct** (gōn'ōdūkt) *n.* [Gk. *gonos*, birth; *L. ductus*, led.] A genital duct leading from gonad to exterior.

**gonogenesis** (gōn'ōjēn'ēsis) *n.* [Gk. *gone*, seed; *genesis*, descent.] Gametogenesis.

**gonomery** (gōnōm'ērī) *n.* [Gk. *gonos*, descent; *meros*, part.] Theory that paternal and maternal chromosomes remain in separate groups throughout life; separate grouping of paternal and maternal chromosomes during cleavage stages of some organisms.

**gononephrotome** (gōn'ōnēf'rōtōm) *n.* [Gk. *gone*, seed; *nephros*, kidney; *temnein*, to cut.] Embryonic segment containing primordia of the urinogenital system.

**gononucleus** (gōn'ōnū'klēūs) *n.* [Gk. *gonos*, begetting; *L. nucleus*, kernel.] The generative nucleus or micronucleus of many Protozoa.

**gonophore** (gōn'ōfōr) *n.* [Gk. *gone*, seed; *pherein*, to bear.] An elongation of thalamus between corolla and stamens; a reproductive zooid in a hydroid colony.

**gonoplasm** (gōn'ōplāzm) *n.* [Gk. *gone*, seed; *plasma*, mould.] The generative part of protoplasm.

**gonopodium** (gōn'ōpō'dīūm) *n.* [Gk. *gone*, seed; *pous*, foot.] The modi-

- fied anal fin serving as copulatory organ in male poeciliid fishes; gonopod or clasper of male myriopods and insects.
- gonopore** (gōn'ōpōr) *n.* [Gk. *gone*, seed; *poros*, channel.] Reproductive aperture.
- gonosome** (gōn'ōsōm) *n.* [Gk. *gone*, seed; *soma*, body.] The reproductive zooids of a hydrozoan colony collectively.
- gonosphaerium** (gōn'ōsfē'riūm) *n.* [Gk. *gone*, seed; *sphaira*, globe.] An oosphere.
- gonostyle** (gōn'ōstil) *n.* [Gk. *gonos*, birth; *stylos*, pillar.] The blastostyle; sexual palpon or siphon of Siphonophora; clasper of Diptera.
- gonotheca** (gōn'ōthē'kā) *n.* [Gk. *gonos*, birth; *theke*, cup.] A transparent protective expansion of the perisarc round a blastostyle or gonophore.
- gonotokont**,—an auxocyte, *q.v.*
- gonotome** (gōn'ōtōm) *n.* [Gk. *gonos*, birth; *temnein*, to cut.] An embryonic segment containing the primordium of the gonad.
- gonotrema** (gōn'ōtrēmā) *n.* [Gk. *gonos*, offspring; *trema*, hole.] Genital aperture, as in Arachnida; gonotreme.
- gonozoid** (gōn'ōzō'oid) *n.* [Gk. *gonos*, birth; *zoon*, animal; *eidōs*, form.] A gonophore or reproductive individual of a hydrozoan colony; a zoid containing a gonad.
- gonydial** (gōnid'īāl) *a.* [Gk. *genys*, lower jaw.] *Pert.* a gonys.
- gonys** (gōn'īs) *n.* [Gk. *genys*, lower jaw.] Lower part or keel of bird's bill.
- Graafian follicle** [*R. de Graaf*, Dutch anatomist]. A vesicular capsule in ovary and surrounding an ovum; ovisac with developing ova.
- Graber's organ**,—a complex larval organ, presumably sensory, in Tabanidae.
- gracilis** (grās'īlis) *n.* [L. *gracilis*, slender.] A superficial muscle on medial side of the thigh; a fasciculus of medulla oblongata; nucleus of grey matter ventral to clava.
- graduated** (grād'ūātēd) *a.* [L. *gradus*, step.] Tapering; becoming longer or shorter by steps.
- graft-hybrid**,—an individual formed from graft and stock, and showing characteristics of both; graft chimaera.
- grain** (grān) *n.* [L. *granum*, grain.] The caryopsis or seed of cereals; a granular prominence on the back of a sepal.
- graminifolious** (grām'inifō'liūs) *a.* [L. *gramen*, grass; *folium*, leaf.] With grass-like leaves.
- graminivorous** (grām'iniv'ōrūs) *a.* [L. *gramen*, grass; *vorare*, to eat.] Grass-eating.
- Grandry's corpuscle** [—*Grandry*, Belgian anatomist]. An end-organ of touch, in beak and tongue of birds.
- granellae** (grānēl'ē) *n. plu.* [L. *dim.* of *granum*, grain.] Oval, refractile granules consisting chiefly of barium sulphate, found in the tubes of certain Sarcodina.
- granellarium** (grān'clār'iūm) *n.* [L. *dim.* of *granum*, grain.] The system of granellae-containing tubes of Sarcodina.
- granose** (grān'ōs) *a.* [L. *granum*, grain.] In appearance like a chain of grains, like some insect antennae; moniliform.
- granular** (grān'ulār) *a.* [L. *granum*, grain.] Consisting of grains or granules; appearing as if made up of granules.
- granulation** (grān'ulā'shūn) *n.* [L. *granum*, grain.] A grain-like formation or eminence; *appl.* arachnoid elevations or Pacchionian glands on outer surface of dura mater.
- granule** (grān'ul) *n.* [L. *granulum*, small grain.] A small particle of matter; a small grain.
- granule cells**,—ovoid or spheroid cells formed of soft protoplasm containing basophil granules.
- granule glands**,—the prostate glands of flatworms; skin glands of amphibians.
- granules of Nissl**,—*see* Nissl granules.

**granulocytes** (grăn'ülösits) *n. plu.*

[L. *granulum*, small grain; Gk. *kytos*, cell.] Granular white blood corpuscles or polymorphs; myeloid cells formed in bone marrow.

**graphiohexaster** (grăf'îöhëksäs'tër)

*n.* [Gk. *graphis*, style; *hex*, six; *aster*, star.] A hexaster spicule with long outwardly-directed filamentous processes from four rays.

**grater** (gră'tër) *n.* [O.F. *grater*, to scrape.] A denticle of Eunice.

**gravid** (grăv'id) *a.* [L. *gravidus*, loaded.] *Appl.* female with eggs, or pregnant uterus.

**graviperception** (grăv'îpërsëp'shün) *n.* [L. *gravis*, heavy; *percipere*, to feel.] Irritability to gravity; geotropic reaction.

**gravitational** (grăv'itäs'hönäl) *a.* [L. *gravis*, heavy.] *Appl.* water in excess of soil requirements, which sinks under action of gravity and drains away.

**gravity** (grăv'iti) *n.* [L. *gravitas*, heaviness.] The force of attraction of all bodies towards each other; the tendency of terrestrial bodies to be drawn towards the earth's centre.

**green glands**,—the excretory antennary glands of certain Crustacea.

**gregaloid** (grëg'älöid) *a.* [L. *grex*, flock; Gk. *eidos*, form.] *Appl.* colony of protozoa of indefinite shape, usually with gelatinous base, formed by incomplete division of individuals or partial union of adults.

**gregarious** (grëgä'rîüs) *a.* [L. *grex*, flock.] Tending to herd together; colonial; growing in clusters.

**grey matter**,—tissue abundantly supplied with nerve cells, of greyish colour, internal to white matter in spinal cord, external in cerebrum.

**grey nerve - fibres**,—semitransparent, grey or yellowish-grey, gelatinous non-medullated nerve-fibres, comprising most of the fibres of the sympathetic system and some of the cerebro-spinal; amyelinate fibres.

**groin** (groin) *n.* [A.S. *grynde*, depres-

sion.] The depressed part of body between abdomen and thigh.

**groove** (groov) *n.* [Dut. *groef*, channel.] Any channel, furrow, or depression, as carotid, costal, optic, primitive vertebral groove.

**ground tissue**,—*see* conjunctive parenchyma.

**growing point**,—a part of plant body at which cell-division is localised, generally terminal and composed of meristematic cells.

**growth factor G**,—vitamin B<sub>2</sub> or riboflavin, *q.v.*

**growth hormones**,—in animals, growth - promoting pituitary secretions; in plants, auxins.

**grumose** (groom'ös) *a.* [L. *grumus*, hillock.] Clotted; knotted; collected into granule masses; grumous.

**grumulus** (groom'mülüs) *n.* [*Dim.* of L. *grumus*, hillock.] Polar organ or caudal cell cluster in insect embryo.

**gryochrome** (grî'ökrôm) *a.* [Gk. *gry*, morsel; *chroma*, colour.] With Nissl granules irregularly scattered; *appl.* neurones, as in spinal ganglia.

**guanidine** (gwân'idîn) *n.* [Peruvian, *huano*, dung.] A substance produced by oxidation of guanin, whose metabolism is regulated by parathyroids; CH<sub>5</sub>N<sub>3</sub>.

**guanine** (gwân'in) *n.* [Peruvian, *huano*, dung.] A purine base found in some plants, teleosts, mammals, etc.; C<sub>5</sub>H<sub>5</sub>ON<sub>5</sub>.

**guanophore** (gwân'öfôr) *n.* [Peruvian, *huano*, dung; Gk. *pherein*, to bear.] A yellow pigment-bearing cell; an iridocyte.

**guanylic** (gwân'ilik) *a.* [Peruvian, *huano*, dung.] *Appl.* a nucleic acid, yielding guanin, found in pancreas and liver.

**guard** (gård) *n.* [O.F. *guarder*, to guard.] Rostrum of a belemnite.

**guard cells**,—cells surrounding stomata of aerial epidermis of plant tissue.

**gubernacular** (gü'bërnäk'ülär) *a.* [L. *gubernaculum*, rudder.] *Pert.* the gubernaculum.

**gubernaculum** (gū'bĕrnāk'ūlŭm) *n.* [L. *gubernaculum*, rudder.] A cord stretching from epididymis to scrotal wall; mesocardial ligament; tissue between gum and dental sac of permanent teeth; strands of blastostylar ectoderm between gonophore and gonotheca in Hydromedusae; a posterior flagellum functioning as a rudder.

**guest insect**,—an insect living or breeding in the nest of another.

**gula** (gū'lā) *n.* [L. *gula*, gullet.] The upper part of throat; median ventral sclerite of insect head.

**gumentum** (gū'lāmĕn'tŭm) *n.* [L. *gula*, gullet; *mentum*, chin.] Plate formed by fusion of gula and submentum in insects.

**gular** (gū'lār) *a.* [L. *gula*, gullet.] *Pert.* throat; *appl.* median and lateral plates between rami of mandible in Crossopterygii and Polypterini. *n.* An anterior unpaired horny shield on plastron of Chelonia.

**gullet** (gūl'ĕt) *n.* [O.F. *goulet*, from L. *gula*, gullet.] The oesophagus, a muscular canal extending from mouth cavity to stomach; the canal between cytostome and endoplasm of Ciliata.

**gum** (gŭm) *n.* [L. *gummi*, gum.] An exudation of certain plants and trees; vegetable mucilage.

**gummiferous** (gŭmīf'ĕrŭs) *a.* [L. *gummi*, gum; *ferre* to carry.] Gum-producing or exuding.

**gummosis** (gŭmō'sis) *n.* [L. *gummi*, gum.] Condition of plant tissue when cell-walls become gummy.

**gums** (gŭmz) *n. plu.* [A.S. *goma*, jaws.] Dense fibrous tissues investing jaws; gingivae.

**gustatory** (gŭs'tātōrī) *a.* [L. *gustare*, to taste.] *Pert.* sense of taste; *appl.* cells, hairs, pores, calyculus (*g.v.*), nerves.

**gut** (gŭt) *n.* [A.S. *gūt*, channel.] Intestine or part thereof, according to structure of animal.

**gutta** (gŭt'ā) *n.* [L. *gutta*, drop.] A small spot of colour on insect wing or elsewhere.

**guttate** (gŭt'āt) *a.* [L. *gutta*, drop.] Having drop-like markings.

**guttation** (gŭtā'shŭn) *n.* [L. *gutta*, drop.] Formation of drops of water on plants from moisture in air; exudation of aqueous solutions, as through hydathodes, or by sporangiophores, or by nectaries.

**guttiform** (gŭt'īfōrm) *a.* [L. *gutta*, drop; *forma*, shape.] Drop-like; in the form of a drop.

**guttulate** (gŭt'ŭlāt) *a.* [L. *guttula*, small drop.] In the form of a small drop, as markings.

**gymnanthous** (jĭmnān'thŭs) *a.* [Gk. *gymnos*, uncovered; *anthos*, flower.] With no floral envelope; achlamydeous.

**gymnetrous** (jĭmnĕ'trŭs) *a.* [Gk. *gymnos*, naked; *etron*, abdomen.] Without an anal fin.

**gymnoarian** (jĭm'nōā'riān) *a.* [Gk. *gymnos*, naked; *oarion*, small egg.] *Appl.* gonads when naked, or not enclosed in coelomic sacs; *opp.* cystoarian.

**gymnoblasic** (jĭm'nōblās'tĭk) *a.* [Gk. *gymnos*, naked; *blastos*, bud.] Without hydrothecae and gonothecae; *appl.* certain Coelenterata.

**gymnocarpic** (jĭm'nōkār'pĭk) *a.* [Gk. *gymnos*, uncovered; *karpos*, fruit.] With naked fruit; *appl.* lichens with uncovered apothecia, mosses with expanded hymenium; gymnocarpous.

**gymnocidium** (jĭm'nōsĭd'ĭŭm) *n.* [Gk. *gymnos*, uncovered; *oikos*, house; *idion*, dim.] A basal swelling of certain moss capsules.

**gymnocyte** (jĭm'nōsīt) *n.* [Gk. *gymnos*, uncovered; *kytos*, hollow.] A cell without a defining cell-wall; *opp.* leucocyte.

**gymnocytoide** (jĭm'nōsītōd) *n.* [Gk. *gymnos*, naked; *kytos*, hollow; *eidos*, form.] Cytoide without cell-wall or nucleus.

**gymnogenous** (jĭmnōj'ĕnŭs) *a.* [Gk. *gymnos*, naked; *genos*, offspring.] Naked when born; *appl.* birds.

**gymnogynous** (jĭmnōj'inŭs) *a.* [Gk. *gymnos*, naked; *gynē*, female.] With exposed ovary.

**gymnoplast** (jim'nōplást) *n.* [Gk. *gymnos*, naked; *plastos*, formed.] Protoplasm without definite formation or cell-wall.

**gymnopterous** (jimnöp'tērūs) *a.* [Gk. *gymnos*, naked; *pteron*, wing.] Having bare wings, without scales; *appl.* insects.

**gymnorhinal** (jim'nōrī'nāl) *a.* [Gk. *gymnos*, naked; *rhis*, nose.] With nostril region not covered by feathers, as in some birds.

**gymnosomatous** (jim'nōsōm'ātūs) *a.* [Gk. *gymnos*, naked; *soma*, body.] Having no shell or mantle, as certain molluscs.

**gymnospermous** (jimnōspēr'mūs) *a.* [Gk. *gymnos*, uncovered; *sperma*, seed.] Having seeds not enclosed in a true ovary, as conifers.

**gymnospor** (jim'nōspōr) *n.* [Gk. *gymnos*, naked; *sporos*, seed.] A naked germ or spore not enclosed in a protective envelope.

**gymnostomatous** (jim'nōstōm'ātūs) *a.* [Gk. *gymnos*, naked; *stoma*, mouth.] Naked-mouthed; having no peristome, *appl.* mosses; gymnostomous.

**gynaecaner** (jin'ēkā'nēr) *n.* [Gk. *gyne*, woman; *aner*, man.] A male ant resembling a female; a gynaecomorphic male.

**gynaecium**,—gynoeceum, *q.v.*

**gynaecoid** (jin'ē'koid) *n.* [Gk. *gyne*, woman; *eidōs*, form.] An egg-laying worker ant.

**gynaecophore** (jin'ē'kōfōr) *n.* [Gk. *gyne*, woman; *pherein*, to carry.] Canal or groove of certain worms formed by inrolling of sides, in which the female is carried; gynaecophoric or gynaecophoral groove.

**gynander** (jin'ān'dēr) *n.* [Gk. *gyne*, female; *aner*, male.] A gynandromorph.

**gynandris** (jin'ān'drīzm) *n.* [Gk. *gyne*, women; *aner*, man.] Hermaphroditism.

**gynandromorph** (jin'ān'drōmōrf) *n.* [Gk. *gyne*, woman; *aner*, man; *morphe*, form.] An individual exhibiting a spatial mosaic of male and female characters; *cf.* intersex.

**gynandromorphism** (jin'ān'drōmōr-fizm). [Gk. *gyne*, woman; *aner*, man; *morphe*, form.] Condition of being a gynandromorph or manifesting a mosaic of male and female sexual characters, as having one side characteristically male, the other female.

**gynandrophore** (jin'ān'drōfōr) *n.* [Gk. *gyne*, woman; *aner*, man; *pherein*, to carry.] An axial prolongation bearing a sporophyll.

**gynandrosporous** (jin'ān'drōspō'rūs) *a.* [Gk. *gyne*, woman; *aner*, man; *sporos*, seed.] With androspores adjoining the oogonium, as in some algae.

**gynandrous** (jin'ān'drūs) *a.* [Gk. *gyne*, woman; *aner*, man.] Having stamens fused with pistils, as in some orchids.

**gynantherous** (jin'ān'thērūs) *a.* [Gk. *gyne*, woman; *anthos*, flower.] Having stamens converted into pistils.

**gynase** (ji'nās) *n.* [Gk. *gyne*, woman.] A female-determining factor in the form of an enzyme or hormone.

**gynatrium** (jin'ā'triūm) *n.* [Gk. *gyne*, woman; *L. atrium*, entrance-hall.] Female genital pouch or vestibulum, of certain insects.

**gyne** (ji'nē) *n.* [Gk. *gyne*, woman.] A female ant.

**gynecium**,—gynoeceum, *q.v.*

**gynetype** (jin'ētīp) *n.* [Gk. *gyne*, woman; *typos*, pattern.] Type specimen of the female of a species.

**gynobase** (jin'ōbās) *n.* [Gk. *gyne*, woman; *L. basis*, base.] A gynoeceum-bearing receptacle of certain plants; condition in which style appears to arise from ovary.

**gynobasic style**,—a style arising from base of carpel.

**gynodioecious** (jin'ōdiē'siūs) *a.* [Gk. *gyne*, woman; *dis*, twice; *oikos*, house.] *Appl.* plants producing female or hermaphrodite flowers only.

**gynoeceum** (jin'ē'siūm) *n.* [Gk. *gyne*, woman; *oikos*, house.] The pistils, carpels, or female organs of a flower.

**gynogenesis** (jĭ'nöjĕn'esis) *n.* [Gk. *gyne*, woman; *genesis*, descent.] Development from eggs penetrated by the spermatozoon but not embodying its nucleus, as in some nematodes.

**gynogonidia** (jĭ'nögönid'ia) *n. plu.* [Gk. *gyne*, woman; *gonidion*, small seed.] Female sexual elements formed after repeated division of parthenogonidia in Mastigophora.

**gynomerogony** (jĭ'nömërog'oni) *n.* [Gk. *gyne*, female; *meros*, part; *gone*, generation.] The development of an egg fragment, obtained before fusion with male nucleus, and containing maternal chromosomes only.

**gynomonoecious** (jĭ'nömönë'siūs) *a.* [Gk. *gyne*, woman; *monos*, alone; *oikos*, house.] *Appl.* plants with pistillate and hermaphrodite flowers only.

**gynophore** (jĭ'nöfôr) *n.* [Gk. *gyne*, woman; *pherein*, to carry.] A stalk supporting the ovary; elongation of thalamus between stamens and pistil; female gonophore.

**gynospore** (jĭ'nöspôr) *n.* [Gk. *gyne*, female; *sporos*, seed.] Female spore; megaspore; embryo-sac.

**gynostegium** (jĭn'östë'jiüm) *n.* [Gk. *gyne*, woman; *steege*, roof.] A protective covering for a gynoeceum.

**gynostemium** (jĭn'östë'miüm) *n.* [Gk. *gyne*, woman; *stemon*, warp.] The column composed of united pistil and stamens in orchids.

**gypsophil** (jĭp'söfil) *a.* [Gk. *gypsos*, chalk, gypsum; *philein*, to love.] Thriving in soils containing chalk or gypsum; gypsophilous; calcicolous, calciphil.

**gypsophyte** (jĭp'söfit) *n.* [Gk. *gypsos*, chalk, gypsum; *phyton*, plant.] A gypsophil plant; calcicole, calcipete, calciphile, calciphyte.

**gyral** (jĭ'räl) *a.* [L. *gyrus*, circle.] *Pert.* a gyrus; *pert.* circular or spiral movement.

**gyration** (jĭrā'shün) *n.* [L. *gyrare*, to revolve.] Rotation, as of cells; a whorl of a spiral shell.

**gyre** (jĭr) *n.* [Gk. *gyros*, L. *gyrus*,

circle.] Circular movement; spiral coiling, as of chromatids.

**gyrencephalic** (jĭ'rĕnkëfäl'ik, -sëf-) *a.* [Gk. *gyros*, circle; *engkephalos*, brain.] Having cerebral convolutions; gyrencephalous. (*opp.* lissencephalic.)

**gyri**,—*plu.* of gyrus.

**gyrose** (jĭ'rös) *a.* [L. *gyrare*, to revolve.] With undulating lines; sinuous.

**gyrus** (jĭ'rüs) *n.* [L. *gyrus*, circle.] A cerebral convolution; a ridge winding between two grooves.

## H

**habenula** (häbĕn'ulä) *n.* [L. *habena*, strap.] A name *appl.* certain band-like structures. *a.* Habenular; *appl.* a commissure of epithalamus.

**habitat** (häb'itāt) *n.* [L. *habitare*, to inhabit.] The locality or external environment in which a plant or animal lives.

**habitation** (häbit'üä'shün) *n.* [L. *habituare*, to bring into a habit.] The adjustment, effected in a cell or in an organism, by which subsequent contacts of the same stimulus produce diminishing effects.

**habitus** (häb'itüs) *n.* [L. *habitus*, appearance.] The general appearance or conformation characteristic of a plant or an animal; constitutional tendency.

**hadrocentric** (häd'rösĕn'trik) *a.* [Gk. *hadros*, thick; *kentron*, centre.] With phloem surrounding xylem.

**hadrome** (häd'röm) *n.* [Gk. *hadros*, thick.] Conducting tissue of xylem; hadromestome.

**Haeckel's law** [E. H. Haeckel, German zoologist]. Biogenetic law; recapitulation theory, *q.v.*

**haem** (hēm) *n.* [Gk. *haima*, blood.] A blood substance, oxidising to haematin;  $C_{34}H_{32}O_4N_4Fe$ .

**haemachrome** (hë'mäkröm) *n.* [Gk. *haima*, blood; *chromos*, colour.] Colouring matter found in blood.

**haemacyte** (hë'mäsit) *n.* [Gk. *haima*, blood; *kytos*, hollow.] A blood corpuscle.

**haemad** (hēm'mād) *adv.* [Gk. *haima*, blood.] Situated on same side of vertebral column as heart.

**haemal** (hēm'māl) *a.* [Gk. *haima*, blood.] *Pert.* blood or blood-vessels; situated on same side of vertebral column as heart.

**haemamoeba** (hēm'māmē'bā) *n.* [Gk. *haima*, blood; *amoibe*, change.] Protozoon with an amoeboid trophozoitic stage parasitic in a red blood-corpuscle.

**haemangioblast** (hēmān'jiōblāst) *n.* [Gk. *haima*, blood; *anggeion*, vessel; *blastos*, bud.] A blood island, *q.v.*

**haemapoietic** (hēm'māpoiēt'ik) *a.* [Gk. *haima*, blood; *poiein*, to form.] Blood-forming; haemopoietic.

**haemaphysys** (hēm'māpōf'isis) *n.* [Gk. *haima*, blood; *apo*, from; *phyein*, to grow.] One of plate-like or spine-like processes growing from the latero-ventral surfaces of a vertebral centrum.

**haematal** (hēm'ātāl) *a.* [Gk. *haima*, blood.] *Pert.* blood or blood-vessels.

**haematid** (hēm'ātid) *n.* [Gk. *haima*, blood.] Red blood-corpuscle.

**haematin** (hēm'ātin) *n.* [Gk. *haima*, blood.] A pigment formed by decomposition of haemoglobin, containing iron and having the property of carrying oxygen; protohaem;  $C_{34}H_{33}O_8N_4Fe$ .

**haematobic** (hēm'ātō'bik) *a.* [Gk. *haima*, blood; *bios*, life.] Living in blood.

**haematobium** (hēm'ātō'bīūm) *n.* [Gk. *haima*, blood; *bios*, life.] An organism living in blood.

**haematoblast** (hēm'ātōblāst) *n.* [Gk. *haima*, blood; *blastos*, bud.] A cell that will develop into a red blood-corpuscle; thrombocyte; blood platelet.

**haematochrome** (hēm'ātōkrōm) *n.* [Gk. *haima*, blood; *chroma*, colour.] A carotenoid red pigment of certain algae.

**haematocryal** (hēm'ātōkrī'āl) *a.* [Gk. *haima*, blood; *kryos*, cold.] Cold-blooded.

**haematocyanin** (hēm'ātōsī'ānIn) *n.*

[Gk. *haima*, blood; *kyanos*, dark blue.] Haemocyanin, *q.v.*

**haematocytozoon** (hēm'ātōsī'tōzō'ōn) *n.* [Gk. *haima*, blood; *kytos*, hollow; *zoon*, animal.] An intracorpuseular blood parasite.

**haematodocha** (hēm'ātōdōk'ā) *n.* [Gk. *haima*, blood; *doche*, receptacle.] A fibro-elastic bag at base of palpal organ in Araneae.

**haematogen** (hēm'ātōjēn) *n.* [Gk. *haima*, blood; *genos*, birth.] A nucleoprotein containing iron.

**haematogenesis** (hēm'ātōjēn'esis) *n.* [Gk. *haima*, blood; *genesis*, descent.] The formation of blood.

**haematogenous** (hēm'ātōj'ēnūs) *a.* [Gk. *haima*, blood; *genos*, birth.] Formed in blood; derived from blood.

**haematoidin** (hēm'ātoid'in) *n.* [Gk. *haima*, blood; *eidos*, form.] An iron-free derivative of haemoglobin, forming crystals in blood clots, and identical with bilirubin.

**haematolysis** (hēm'ātōl'isis) *n.* [Gk. *haima*, blood; *lysis*, loosing.] Haemolysis, *q.v.*

**haematophagous** (hēm'ātōf'āgūs) *a.* [Gk. *haima*, blood; *phagein*, to eat.] Feeding on blood, or obtaining nourishment from blood.

**haematophyte** (hēm'ātōfit) *n.* [Gk. *haima*, blood; *phyton*, plant.] A vegetable micro-organism in blood.

**haematoporphyrin** (hēm'ātōpōr'fīrin) *n.* [Gk. *haima*, blood; *porphyra*, purple.] An iron-free pigment formed by decomposition of haematin;  $C_{34}H_{33}O_8N_4$ .

**haematosis** (hēm'ātō'sis) *n.* [Gk. *haimatoein*, to change to blood.] Blood-formation.

**haematothermal** (hēm'ātōthēr'māl) *a.* [Gk. *haima*, blood; *thermos*, warm.] Warm-blooded.

**haematozoon** (hēm'ātōzō'ōn) *n.* [Gk. *haima*, blood; *zoon*, animal.] An animal parasitic in blood.

**haemerythrin** (hēm'ērith'rīn) *n.* [Gk. *haima*, blood; *erythros*, red.] A red respiratory pigment of corpuscles in body fluid of sipunculids and some annelids; haemoerythrin.



**haemic** (hē'mik) *a.* [Gk. *haima*, blood.] *Pert.* blood.

**haemin** (hē'min) *n.* [Gk. *haima*, blood.] Haem;  $\text{C}_{34}\text{H}_{32}\text{O}_4\text{N}_4\text{FeCl}$ .

**haemoblast** (hē'möbläst) *n.* [Gk. *haima*, blood; *blastos*, bud.] A cell which gives rise to an erythroblast; haematoblast.

**haemochromes** (hē'mökrörmz) *n. plu.* [Gk. *haima*, blood; *chroma*, colour.] Blood pigments, as haemoglobin, haemocyanin, chlorocruorin, erythrocrucorin, haemoerythrin.

**haemochromogen** (hē'mökrö'möjēn) *n.* [Gk. *haima*, blood; *chroma*, colour; *genos*, birth.] A chromoprotein produced by alkali and reduction of haemoglobin.

**haemoclastic** (hē'mökläs'tik) *a.* [Gk. *haima*, blood; *klastos*, broken.] Breaking down blood cells, *appl.* tissues; *opp.* haemoplastic.

**haemocoele** (hē'mösēl) *n.* [Gk. *haima*, blood; *korlos*, hollow.] An expanded portion of the blood system which replaces the true coelom.

**haemoconia** (hē'mököñ'fā) *n.* [Gk. *haima*, blood; *konis*, dust.] Minute fat droplets entering or leaving cells; chylomicrons, *q.v.*

**haemocyanin** (hē'mösi'änin) *n.* [Gk. *haima*, blood; *kyanos*, dark blue.] A haemoglobin-like blood pigment containing copper instead of iron, in molluscs, crustaceans, and some arachnids.

**haemocyte** (hē'mösit) *n.* [Gk. *haima*, blood; *kytos*, hollow.] A blood cell, as in insects.

**haemocytoblast** (hē'mösi'töbläst) *n.* [Gk. *haima*, blood; *kytos*, hollow; *blastos*, bud.] Primitive stem cell from which all blood cells are derived; a lymphoid haemoblast; lymphoidocyte.

**haemocytolysis** (hē'mösitöl'isis) *n.* [Gk. *haima*, blood; *kytos*, hollow; *lyein*, to dissolve.] Breaking up of red blood-corpuscles by solution.

**haemocytotrypsis** (hē'mösi'tötrīp'sis) *n.* [Gk. *haima*, blood; *kytos*,

hollow; *tribein*, to rub.] Breaking up of blood-corpuscles by pressure.

**haemoerythrin** (hē'möērith'rīn) *n.* [Gk. *haima*, blood; *erythros*, red.] A red respiratory pigment in certain invertebrates; haemerythrin.

**haemofuscin** (hē'möfūs'sin) *n.* [Gk. *haima*, blood; *L. fuscus*, tawny.] A yellow blood pigment deposited under various pathological conditions.

**haemoglobin** (hē'möglō'bīn) *n.* [Gk. *haima*, blood; *globos*, sphere.] The red respiratory pigment of blood of vertebrates, consisting of haematin united to globin.

**haemohistioblast** (hē'möhīs'tiöbläst) *n.* [Gk. *haima*, blood; *histion*, tissue; *blastos*, bud.] A free macrophage in blood, especially of veins.

**haemoid** (hē'moid) *a.* [Gk. *haima*, blood; *oidos*, form.] Resembling blood.

**haemolymph** (hē'mölimf) *n.* [Gk. *haima*, blood; *L. lymphā*, water.] A fluid found in coelom of some invertebrates, regarded as equivalent to blood and lymph of higher forms.

**haemolysin** (hē'möli'sin) *n.* [Gk. *haima*, blood; *lyein*, to dissolve.] A substance developed in or added to blood serum, capable of destroying red blood-corpuscles.

**haemolysis** (hēmöl'isis) *n.* [Gk. *haima*, blood; *lysis*, loosing.] The lysis or solution of red blood-corpuscles; erythrocytolysis; laking.

**haemophilia** (hēm'öfil'fā) *n.* [Gk. *haima*, blood; *philos*, loving.] Absence of ready coagulation of shed blood, a sex-linked hereditary characteristic.

**haemoplasmodium** (hē'möplāzmō'diūm, -plās-) *n.* [Gk. *haima*, blood; *plasma*, mould.] A unicellular parasite of blood.

**haemoplastic** (hē'möplās'tik) *a.* [Gk. *haima*, blood; *plastos*, formed.] Blood-forming; haemopoietic. *Opp.* haemoclastic.

**haemopoiesis** (hē'mōpoi'ēsis) *n.*

[Gk. *haima*, blood; *poiesis*, making.] The formation and development of blood cells.

**haemopoietic** (hē'mōpoiēt'ik) *a.* [Gk.

*haima*, blood; *poietikos* productive.] Blood-forming; *pert.* haemopoiesis; haemoplastic.

**haemopsonin** (hēmōp'sōnin) *n.* [Gk.

*haima*, blood; *opsonein*, to cater.] An opsonin for erythrocytes.

**haemorrhoidal** (hēmōroid'āl) *a.* [Gk.

*haima*, blood; *rhein*, to flow.] Rectal, *appl.* blood-vessels, nerve.

**haemosiderin** (hēmōsidē'rīn) *n.*

[Gk. *haima*, blood; *sideros*, iron.] A yellow pigment of blood giving an iron reaction.

**haemostatic** (hē-mōstāt'ik) *a.* [Gk.

*haima*, blood; *statikos*, causing to stand.] *Appl.* membrane crossing joint between trochanter and femur in autotomy of limb of some arthropods.

**haemotoxin** (hē'mōtōk'sīn) *n.* [Gk.

*haima*, blood; *toxikon*, poison.] A toxin which produces haemolysis.

**haemotropic** (hē'mōtrōp'ik) *a.* [Gk.

*haima*, blood; *trope*, turn.] Affecting or acting upon blood.

**haemozoin** (hē'mōzō'in) *n.* [Gk.

*haima*, blood; *zoon*, animal.] Granules of a black pigment, the residue from digestion of haemoglobin by malarial parasites.

**hair** (hār) *n.* [A.S. *haer*.] Any epi-

dermal filamentous outgrowth consisting of one or more cells, varied in shape; a thread-like or filamentous outgrowth of epidermis of animals; a setum, *q.v.*

**hair cells**,—sensory cells in organ of Corti.

**hair follicle**,—tubular sheath formed by invagination of epidermis and surrounding base of hair.

**half-inferior**,—having ovary but partially adherent to calyx.

**half-spindle**,—unipolar spindle, as in meiosis of some insects.

**half-terete**,—rounded on one side, flat on the other.

**haloplankton**,—haloplankton, *q.v.*

**Haller's organ** [*G. Haller*, German zoologist]. A tarsal chemoreceptor in ticks.

**hallux** (hāl'ūks) *n.* [*L. hallux*, great toe.] First digit of hind-limb.

**halm**,—haulm.

**halobios** (hāl'ōbī'ōs) *n.* [Gk. *hals*, sea; *bios*, life.] Sum total of organisms living in the sea.

**halolimnic** (hāl'ōlim'nīk) *a.* [Gk. *hals*, sea; *limne*, marsh.] *Pert.* marine organisms modified to live in fresh water.

**halophilous** (hālōf'ilūs) *a.* [Gk. *hals*, salt; *philein*, to love.] Salt-loving; thriving in presence of salt; halophilic.

**halophyte** (hāl'ōfit) *n.* [Gk. *hals*, salt; *phyton*, plant.] A shore plant; plant capable of thriving on salt, impregnated soils.

**haloplankton** (hāl'ōplāng'ktōn) *n.*

[Gk. *hals*, sea; *planktos*, wandering.] The organisms drifting in the sea; also haliplankton.

**halosere** (hāl'ōsēr) *n.* [Gk. *hals*, salt; *L. serere*, to put in a row.] A plant succession originating in a saline area.

**halteres** (hāltē'rēz) *n. plu.* [Gk. *halter*, weight.] A pair of small capitate bodies representing rudimentary posterior wings in Diptera; balancers, poisers.

**hamate** (hā'māt) *a.* [*L. hamatus*, hooked.] Hooked or hook-shaped at the tip; hamose; uncinat.

**hamatum** (hāmā'tūm) *n.* [*L. hamatus*, hooked.] The unciform bone in the carpus, probably corresponding to fourth and fifth distalia of a typical pentadactyl limb.

**hamirostrate** (hā'mirōs'trāt) *a.* [*L. hamus*, hook; *rostrum*, beak.] Having a hooked beak.

**hamstrings**,—tendons of insertion of the posterior femoral muscles, *i.e.*, of semitendinosus, semimembranosus, and biceps.

**hamula** (hām'ulā) *n.* [*L. hamulus*, little hook.] Retinaculum, of insects; fused ventral appendages acting with caudal furcula in spring-tails or Collembola; hamulus, *q.v.*

**hamular** (hām'ulār) *a.* [L. *hamus*, hook.] Hooked; hook-like.

**hamulus** (hām'ulūs) *n.* [L. *hamulus*, little hook.] A hooklet, or hook-like process; minute hook-like process on distal barbules which aid in interlocking of feather barbs; retinaculum of Hymenoptera.

**hamus** (hā'mūs) *n.* [L. *hamus*, hook.] Hooked part of uncus in male Lepidoptera.

**hapaxanthous** (hāp'aksān'thūs) *a.* [Gk. *hapax*, once; *anthos*, flower.] With only a single flowering period; hapaxanthic; *opp.* pollakanthic.

**haplobiont** (hāp'lōbī'ōnt) *n.* [Gk. *haploos*, simple; *bion*, living.] An organism characterised by one kind of individual. *Opp.* diplobiont.

**haplocaulescent** (hāp'lōkōlēs'ēnt) *a.* [Gk. *haploos*, simple; L. *caulis*, stem.] With a simple axis, *i.e.* capable of producing seed on the main axis.

**haplochlamydeous** (hāp'lōklāmīd'-ēūs) *a.* [Gk. *haploos*, simple; *chlamys*, cloak.] Having rudimentary leaves in connection with sporophylls.

**haplo-diploid** (hāp'lōdīp'lōid) *a.* [Gk. *haploos*, simple; *diploos*, double; *eidōs*, form.] *Appl.* sex-differentiation in which the male is haploid, the female diploid.

**haplodont** (hāp'lōdōnt) *a.* [Gk. *haploos*, simple; *odous*, tooth.] Having molars with simple crowns.

**haploid** (hāp'lōid) *a.* [Gk. *haploos*, simple; *eidōs*, form.] Having the number of chromosomes characteristic of mature germ-cells for the organism in question; *appl.* the typical gametic number of chromosomes after meiosis. *n.* Organism having one genome; *cf.* diploid.

**haplomitosis** (hāp'lōmītō'sīs) *n.* [Gk. *haploos*, simple; *mitos*, thread.] Type of cell division where nuclear granules form chromospines which withdraw in two groups or divide transversely in the middle.

**haplont** (hāp'lōnt) *n.* [Gk. *haploos*, simple; *on*, being.] An organism having haploid somatic nuclei.

**haploperistomous** (hāp'lōpērīs'tō-mūs) *a.* [Gk. *haploos*, simple; *peri*, around; *stoma*, mouth.] Having a peristome with a single row of teeth, *appl.* mosses.

**haplopetalous** (hāp'lōpēt'ālūs) *a.* [Gk. *haploos*, simple; *petalon*, petal.] With a single row of petals.

**haplophase** (hāp'lōfāz) *n.* [Gk. *haploos*, simple; *phasis*, aspect.] Stage in life-history of an organism when nuclei are haploid; gametophyte phase.

**haploptile** (hāp'lōtil, -ptil) *n.* [Gk. *haploos*, simple; *ptilon*, feather.] Single neossopile, without rachis, formed by precocious development of the barbs of the teleoptile.

**haplosis** (hāplō'sīs) *n.* [Gk. *haploos*, simple.] Halving of the chromosome number during meiosis; reduction and disjunction.

**haplostemonous** (hāp'lōstēm'ōnūs) *a.* [Gk. *haploos*, simple; *stemon*, warp.] Having one whorl of stamens.

**haplotype** (hāp'lōtīp) *n.* [Gk. *haploos*, simple; *typos*, pattern.] The only species in a genus originally, and thereby becoming a genotype.

**haplozygous** (hāplōz'īgūs) *a.* [Gk. *haploos*, simple; *zygon*, yoke.] *Appl.* genes in haploid organisms; hemizygous.

**haptera** (hāp'tērā) *n. plu.* [Gk. *haptein*, to fasten.] Holdfasts, special disc-like outgrowths from the stem-like portion of certain algae, which serve as organs of attachment.

**haptic** (hāp'tik) *a.* [Gk. *haptein*, to touch.] *Pert.* touch; *appl.* stimuli and reactions.

**haptogen** (hāp'tōjēn) *a.* [Gk. *haptein*, to fasten; *-genes*, producing.] *Appl.* a limiting membrane of solidified protein which prevents miscibility.

**haptomonad** (hāp'tōmōn'ād) *n.* [Gk. *haptein*, to fasten; *monas*, unit.] An attached form of certain parasitic Flagellata; *cf.* nectomonad.

**haptophores** (hăp'töförz) *n. plu.*

[Gk. *haptēin*, to fasten; *pherein*, to carry.] The combining qualities of the molecule of a toxin, lysin, opsonin, precipitin, or agglutinin: *cf.* toxophores.

**haptotropic** (hăp'tötöröp'ik) *a.* [Gk.

*haptēin*, to touch; *trope*, turn.] *Appl.* curvature of a plant organ due to contact stimulus; thigmotropic.

**haptotropism** (hăptöt'röpizm) *n.*

[Gk. *haptēin*, to touch; *trope*, turn.] Response to contact stimulus, as in tentacles, tendrils, stems.

**haptotype** (hăp'tótip) *n.* [Gk.

*haptēin*, to touch; *typos*, pattern.] An icotype collected with the holotype but possibly taken from another plant.

**Harderian gland** [*J. J. Harder*, Swiss anatomist]. An accessory lacrimal gland of third eyelid or nictitating membrane.

**harlequin lobe**,—a testicular lobe with cells differing from those of other lobes, in certain Hemiptera.

**harmonic suture**,—an articulation formed by apposition of edges or surfaces, as between palatine bones.

**harmosis** (hărmō'sis) *n.* [Gk. *harmosis*, fitting.] Arrangement and adaptation in response to a stimulus.

**hormozone** (hărmō'zōn) *n.* [Gk. *hormozo*, I arrange.] One of the hormones which influence growth and nutrition.

**harpagones** (hăr'păgō'nēz) *n. plu.* [*L. harpago*, hook.] Claspers or valves of certain male insects; a pair of sclerites between harpes and claspers in mosquitoes; harpes in Lepidoptera.

**harpes** (hăr'pēz) *n. plu.* [Gk. *harpe*, sickle.] Chitinous processes between the claspers of mosquitoes; claspers or valves of Lepidoptera.

**Hassall's concentric corpuscles** [*A. H. Hassall*, English physician]. Epithelial cell nests in medulla of thymus.

**hastate** (hăs'tāt) *a.* [*L. hasta*, spear.] Spear-shaped, more or less triangular with the two basal lobes divergent; *appl.* leaf markings.

**Hatschek's nephridium** [*B. Hatschek*, Austrian zoologist]. A nephridium between notochord and preoral pit in Cephalochorda.

**Hatschek's pit**,—a mucin-secreting gland in roof of oral cavity in Cephalochorda; preoral pit.

**haulm** (hôm) *n.* [*A.S. healm*.] The stem of such plants as peas; the stem of a grass.

**haustellate** (hôs'tēlāt) *a.* [*L. haurire*, to suck.] Having a proboscis adapted for sucking.

**haustellum** (höstēl'um) *n.* [*L. haurire*, to suck.] A proboscis adapted for sucking.

**haustoria**,—*plu.* of haustorium.

**haustorial** (höstō'riäl) *a.* [*L. haurire*, to drink.] *Pert.* or resembling a haustorium.

**haustorium** (höstō'riüm) *n.* [*L. haurire*, to drink.] An outgrowth of stem, root, or hyphae of certain parasitic plants, which serves to draw food from the host plant; sucker; an outgrowth of embryosac which extends to nutritive tissue in certain non-parasitic plants.

**haustra** (hôs'trā) *n. plu.* [*L. haustor*, drawer.] Recesses of sacculations of the colon, between plicae semilunares. *Sing.* haustum.

**Haversian canals** [*C. Havers*, English anatomist]. Small canals in bone, in which lie blood-capillaries, nerve, and lymph-space.

**Haversian system**,—a Haversian canal, the surrounding concentric lamellae and lacunae with canaliculi.

**H-disc**,—lighter region in anisotropic band of myofibrillae; Hensen's disc.

**head-cap**,—apical part or galea of head of spermatozoon; perforatorium.

**head-case**,—the outer hard covering of insect head.

**head-cell**,—one of the cells on manubrium of antheridium of Chara.

**head-kidney**,—the pronephric portion of kidney, in vertebrates usually represented only in embryo; a nephridium usually developed in cephalic segment of invertebrates.

**heart** (hârt) *n.* [A.S. *heorte*.] A hollow muscular organ with varying number of chambers which by rhythmic contraction keeps up circulation of blood; core or central portion of a tree or fruit.

**heart-wood**,—the darker, harder, central wood of trees; duramen.

**heat** (hêt) *n.* [A.S. *haetu*.] A kind of energy manifested in various ways; the sensation of warmth produced by stimulation of special organs; the period of sexual desire.

**heat spot**,—a special area on the skin at which nerve endings sensitive to heat are found.

**hectocotylus** (hêk'tökô'tîlûs) *n.* [Gk. *hekaton*, hundred; *kotylus*, cup.] One of the arms of a male cephalopod, specialised to effect transference of sperms.

**hedonic** (hêdôn'îk) *a.* [Gk. *hedone*, pleasure.] *Appl.* skin glands of certain reptiles, which secrete musk and are specially active at rutting season.

**heel** (hêl) *n.* [A.S. *hela*.] Hinder or posterior tarsal portion of foot; talon or talonid of a tooth; a spinule at base of tibia in Hymenoptera.

**hekistotherm** (hêk'kîstothêrm) *n.* [Gk. *hekistos*, least; *therme*, heat.] A plant that thrives with the minimum of heat, as alpine plants.

**helices**,—*plu.* of helix.

**helicine** (hêl'îsîn) *a.* [Gk. *helix*, spiral.] Spiral; convoluted; hoisted; *appl.* certain convoluted and dilated arteries in penis; *pert.* outer rim of pinna.

**helicoid** (hêl'îkoid) *a.* [Gk. *helix*, spiral; *eidos*, like.] Spiral; shaped like a snail's shell; *pert.* type of sympodial branching in which sympodium consists of fork branches of same side.

**helicoid cyme**,—an inflorescence produced by suppression of successive axes on same side, thus causing the sympodium to be spirally twisted.

**helicorubin** (hêl'îkôroob'in) *n.* [L. *helix*, spiral; *ruber*, red.] A red pigment of gut of pulmonate gastropods.

**helicotrema** (hêl'îkôtrê'mă) *n.* [Gk. *helix*, spiral; *trema*, hole.] A small opening near summit of cochlea by which the scalae vestibuli and tympani communicate.

**heliophil** (hê'lîöfil) *a.* [Gk. *helios*, sun; *philain*, to love.] Adapted for relatively high intensity of light; heliophilic, heliophilous. *Opp.* heliophobic, skiophil.

**heliophobic**,—skiophil. *q.v.*

**heliophyte** (hê'lîöfit) *n.* [Gk. *helios*, sun; *phyton*, plant.] A sun plant, *opp.* shade plant or skiaphyte.

**heliosis** (hê'lîö'sîs) *n.* [Gk. *helios*, sun.] Production of discoloured spots or markings on leaves through concentration of sun on them; solarisation.

**heliotaxis** (hê'lîötāk'sîs) *n.* [Gk. *helios*, sun; *taxis*, arrangement.] Locomotor or other response to stimulus of sunlight.

**heliotropism** (hê'lîöt'röpîzm) *n.* [Gk. *helios*, sun; *trepein*, to run.] Curvature of organisms or certain parts in response to the stimulus of sunlight.

**helix** (hê'liks) *n.* [Gk. *helix*, spiral.] A spiral; the coiled spiral arrangement of certain structures in invertebrates; the outer rim of external ear.

**helmet** (hêl'mêt) *n.* [O.F. *helmet*, head-covering.] The process of bill of hornbills; the bony plates covering head of certain extinct fishes; the galea of flowers and of insects.

**helminthology** (hêl'mînthöl'öjî) *n.* [Gk. *helmins*, worm; *logos*, discourse.] The study of the natural history of worms; the study of parasitic flatworms and round-

**helophyte** (hěl'öfit) *n.* [Gk. *helos*, marsh; *phyton*, plant.] A marsh plant; a cryptophyte growing in soil saturated with water.

**helotism** (hěl'ötizm) *n.* [Gk. *heilotes*, serf, from *Helos*, Laconian town.] Symbiosis in which the one organism enslaves the other and forces it to labour in its behalf, *e.g.* in lichens, in some species of ants.

**hema-**,—see haema-.

**hemelytron** (hémél'itrôn) *n.* [Gk. *hemi*, half; *elytron*, sheath.] Proximally hardened forewing of certain insects; elytron of certain worms; hemelytrum.

**hemera** (hēmēr'ā) *n.* [Gk. *hemera*, day.] The time during which fossiliferous strata constituting a zone of sedimentary rocks were deposited.

**hemeranthous** (hēmērān'thūs) *a.* [Gk. *hemera*, day; *anthos*, flower.] Flowering by day; hemeranthic.

**hemerophyte** (hēmēröfit) *n.* [Gk. *hemeros*, tame; *phyton*, plant.] A cultivated plant.

**hemibasidium** (hēm'ibäsīd'ium) *n.* [Gk. *hemi*, half; *basis*, base; *idion*, dim.] The promycelium of the Ustilaginales.

**hemibathyal** (hēm'ibāthīl'īāl) *a.* [Gk. *hemi*, half; *bathys*, deep; *bios*, life.] *Pert.* plankton between littoral and bathyal zones.

**hemibranch** (hēm'ibrāngk) *n.* [Gk. *hemi*, half; *branchia*, gills.] Gill with gill filaments on one side only; half-gill.

**hemicellulase** (hēm'isēl'ulās) *n.* [Gk. *hemi*, half; L. *cellula*, small cell.] An enzyme which effects hydrolysis of a hemicellulose, occurring in endosperm, fungi, and certain invertebrates.

**hemicellulose** (hēm'isēl'ulōs) *n.* [Gk. *hemi*, half; L. *cellula*, small cell.] One of several polysaccharides, chemically unrelated to cellulose, occurring as cell wall constituents in cotyledons, endosperms, and woody tissues, and serving as reserve food.

**hemicephalous** (hēm'ikēf'älūs, -sēf-). *a.* [Gk. *hemi*, half; *kephale*, head.] *Appl.* insect larvae with reduced head.

**hemichlamydeous** (hēm'iklāmīd'ēūs) *a.* [Gk. *hemi*, half; *chlamys*, cloak.] Having ovuliferous scale inverted and bearing nucellus.

**hemichordate** (hēm'ikôr'dāt) *a.* [Gk. *hemi*, half; *chorde*, string.] Possessing a rudimentary notochord.

**hemicryptophyte** (hēm'ikrip'töfit) *n.* [Gk. *hemi*, half; *kryptos*, hidden; *phyton*, plant.] A plant with dormant buds in the soil surface, the aerial shoots surviving for a season only.

**hemicyclic** (hēm'isī'klīk) *a.* [Gk. *hemi*, half; *kyklos*, round.] With some floral whorls cyclic, others spiral.

**hemiellytron**,—hemelytron, *q.v.*

**hemiepiphyte** (hēm'iep'iffit) *n.* [Gk. *hemi*, half; *epi*, upon; *phyton*, plant.] A plant whose seeds germinate on another plant, but later send roots to the ground.

**hemigamy** (hēmīg'āmi) *n.* [Gk. *hemi*-, half; *gamos*, marriage.] Activation of ovum by male nucleus without nuclear fusion; semigamy.

**hemignathous** (hēmīg'nāthūs) *a.* [Gk. *hemi*, half; *gnathos*, jaw.] Having one jaw shorter than the other, as in some birds.

**hemikaryon** (hēm'ikār'ion) *n.* [Gk. *hemi*, half; *karyon*, kernel.] A nucleus with gametic or haploid number of chromosomes; a pro-nucleus.

**hemikaryotic** (hēm'ikār'iot'ik) *a.* [Gk. *hemi*, half; *karyon*, kernel.] *Pert.* hemikaryon; haploid.

**hemimetabolic** (hēm'imētāböl'ik) *a.* [Gk. *hemi*, half; *metabole*, change.] Having an incomplete or partial metamorphosis, as certain insects.

**hemiparasitic** (hēm'ipār'āsīt'ik) *a.* [Gk. *hemi*, half; *para*, beside; *sitos*, food.] *Pert.* a plant which is capable of carrying on photosynthesis, but not sufficiently to supply all food material.

**hemipenis** (hēm'ipē'nīs) *n.* [Gk. *hemi*, half; L. *penis*, penis.] One of the paired copulatory organs in lizards and snakes.

**hemipneustic** (hēm'inū'stik, -pnū-) *a.* [Gk. *hemi*, half; *pnein*, to breathe.] With one or more pairs of spiracles closed.

**hemipterygoid** (hēm'iptēr'igoid) *n.* [Gk. *hemi*, half; *pteryx*, wing; *eidos*, form.] In neognath birds, part of pterygoid which fuses with palatine.

**hemisaprophyte** (hēm'isāp'rōfīt) *n.* [Gk. *hemi*, half; *sapros*, decayed; *phyton*, plant.] A plant living partly by photosynthesis, partly by obtaining food from humus.

**hemisome** (hēm'isōm) *n.* [Gk. *hemi*, half; *soma*, body.] The symmetrical half of an animal about a median vertical plane.

**hemisphere** (hēm'isfēr) *n.* [Gk. *hemi*, half; *sphaira*, globe.] One of the cerebral or cerebellar hemispheres.

**hemisystole** (hēm'isis'tōlē) *n.* [Gk. *hemi*, half; *syn*, with; *stellein*, to set.] Contraction of one ventricle of the heart.

**hemitropous** (hēmīt'rōpūs) *a.* [Gk. *hemi*, half; *trope*, turn.] Turned half round, having an ovule with hilum on one side and micropyle, etc., opposite in a plane parallel to placenta.

**hemixis** (hēm'ixsis) *n.* [Gk. *hemi*, half; *mixis*, mingling.] Fragmentation and reorganisation of macronucleus without involving micronucleus, in Paramecium.

**hemizygous** (hēmiz'igūs) *a.* [Gk. *hemi*, half; *zygon*, yoke.] *Appl.* genes in haploid organisms; *appl.* genes without alleles in normal diploid organisms; haplozygous.

**hemo**,—see haemo-.

**Henle's layer** [F. G. J. Henle, German anatomist]. Outermost stratum of nucleated cubical cells in inner root-sheath of a hair follicle.

**Henle's loop**,—loop of a kidney tubule within apical portion of pyramid.

**Henle's sheath**,—perineurium, or its

prolongation surrounding branches of a nerve.

**Hensen's line** [V. Hensen, German histologist]. A disc dividing the darker portion of a sarcomere into two parts; mesophragma, Q line.

**Hensen's node**,—the primitive node, *q.v.*

**Hensen's stripe**,—a band of interlacing fibrils on under surface of tectorial membrane of Corti's organ.

**hepar** (hē'pār) *n.* [Gk. *hepar*, liver.] Liver, or an organ having a similar function.

**heparin** (hē'pārīn) *n.* [Gk. *hepar*, liver.] Substance present in liver and some other tissues, which inhibits formation, or action, of thrombin.

**hepatic** (hēpāt'ik) *a.* [Gk. *hepar*, liver.] *Pert.*, like, or associated with the liver; *pert.* liverworts.

**hepatocolic** (hēp'atōkōl'ik) *a.* [Gk. *hepar*, liver; *colon*, large intestine.] *Pert.* liver and colon.

**hepatocystic** (hēp'atōsis'tik) *a.* [Gk. *hepar*, liver; *kystis*, bladder.] *Pert.* liver and gall-bladder.

**hepatoduodenal** (hēp'atōdū'ōdē'nāl) *a.* [Gk. *hepar*, liver; L. *duodeni*, twelve each.] *Pert.* liver and duodenum.

**hepatointeric** (hēp'atōēntēr'ik) *a.* [Gk. *hepar*, liver; *enteron*, gut.] Of or *pert.* liver and intestine.

**hepatogastric** (hēp'atōgās'trik) *a.* [Gk. *hepar*, liver; *gaster*, stomach.] *Pert.* liver and stomach.

**hepatopancreas**,—digestive gland in many invertebrates, supposed to perform a function similar to that of liver and of pancreas in higher forms.

**hepatoportal** (hēp'atōpōr'tāl) *a.* [Gk. *hepar*, liver; L. *porta*, gate.] *Pert.* or designating portal circulation of liver.

**hepatorenal** (hēp'atōrē'nāl) *a.* [Gk. *hepar*, liver; L. *renes*, kidneys.] *Pert.* liver and kidney.

**hepatoumbilical** (hēp'atōūmbil'ikāl) *a.* [Gk. *hepar*, liver; L. *umbilicus*, navel.] Joining liver and umbili-

**heptagynous** (hēptāj'inūs) *a.* [Gk. *hepta*, seven; *gyne*, female.] With seven pistils.

**heptamerous** (hēptām'erūs) *a.* [Gk. *hepta*, seven; *meros*, part.] Having whorls of flowers in sevens.

**heptandrous** (hēptān'drūs) *a.* [Gk. *hepta*, seven; *aner*, man.] Having seven stamens.

**heptarch** (hēp'tārk) *a.* [Gk. *hepta*, seven; *arche*, beginning.] Having seven initial groups of xylem.

**heptastichous** (hēptās'tikūs) *a.* [Gk. *hepta*, seven; *stichos*, row.] Arranged in seven rows; *appl.* leaves.

**herb** (hērb) *n.* [M.E. *herbe*.] A seed plant without woody stem.

**herbaceous** (hērbā'shūs) *a.* [L. *herbaceus*, grassy.] *Pert.* or resembling a herb, or similarly formed.

**Herbst's corpuscle** [*E. F. Herbst*, German anatomist]. A simple type of Pacinian corpuscle, in birds.

**hercogamy** (hērkōg'āmi) *n.* [Gk. *herkos*, barrier; *gamos*, union.] The condition in which self-fertilisation is impossible; also herkogamy.

**hereditary** (hērēd'itāri) *a.* [L. *hereditas*, heirship.] Transmissible from parent to offspring, as characteristics, physical or mental.

**heredity** (hērēd'iti) *n.* [L. *hereditas*, heirship.] The organic relation between successive generations; germinal constitution.

**hermaphrodite** (hērmāf'rōdīt) *n.* [Gk. *hermaphroditos*, combining both sexes.] An organism with both male and female reproductive organs. *a.* Hermaphroditic.

**hermaphroditism** (hērmāf'rōdītizm) *n.* [Gk. *hermaphroditos*, combining both sexes.] The condition of having both male and female reproductive organs in one individual.

**herpetology** (hēr'pētōl'ōjī) *n.* [Gk. *herpeton*, reptile; *logos*, discourse.] That part of zoology dealing with the structure, habits and classification of reptiles.

**hesperidium** (hēs'pērd'iūm) *n.* [Gk. *Hesperides*, sisters guarding the golden apples given by Gaea.] A

superior, many-celled, few-seeded indehiscent fruit, having epicarp and mesocarp joined together, and endocarp projecting into interior as membranous partitions which divide the pulp into chambers. *E.g.* orange.

**heteracanthous** (hēt'erākān'thūs) *a.* [Gk. *heteros*, other; *akantha*, spine.] Having the spines in dorsal fin asymmetrical.

**heteractinal** (hēt'erāk'tināl) *a.* [Gk. *heteros*, other; *aktis*, ray.] *Pert.* nail-like spicules having disc of six to eight rays in one plane, and a stout ray at right angles to these.

**heterandrous** (hēt'erān'drūs) *a.* [Gk. *heteros*, other; *aner*, man.] With stamens of different length or shape.

**heterauxesis** (hēt'erōksēs'is) *n.* [Gk. *heteros*, other; *auxesis*, growth.] Irregular or asymmetrical growth of organs; relative growth rate of parts of an organism; heterogonic or allometric growth; bradyauxesis and tachyauxesis, *q.v.*

**heterauxin**,—heteroauxin, *q.v.*

**heteraxial** (hēt'erāk'siāl) *a.* [Gk. *heteros*, other; *axis*, axis.] With three unequal axes.

**heteroagglutinin** (hēt'erōāglōot'inin) *n.* [Gk. *heteros*, other; L. *agglutinare*, to glue to.] Fertilisin or agglutinin of eggs which reacts on sperm of different species; *cf.* isoagglutinin.

**heteroauxin** (hēt'erōōk'sin) *n.* [Gk. *heteros*, other; *auxein*, to grow.] A growth-promoting hormone, extracted from fungi; heteroauxin;  $\beta$ -indolyl-acetic acid,  $C_{10}H_9O_2N$ .

**heteroblastic** (hēt'erōblās'tik) *a.* [Gk. *heteros*, other; *blastos*, bud.] With indirect development.

**heterobrachial** (hēt'erōbrāk'iāl) *a.* [Gk. *heteros*, other; L. *brachium*, arm.] *Pert.* chromosome arms on either side of centromere; pericentric.

**heterocarpous** (hēt'erōkār'pūs) *a.* [Gk. *heteros*, other; *karpōs*, fruit.] Bearing two distinct types of fruit.



**heterocellular** (hēt'ērōsēl'ūlār) *a.* [Gk. *heteros*, other; L. *cellula*, small cell.] Composed of cells of more than one type. *Opp.* homocellular.

**heterocephalous** (hēt'ērōkēf'ālūs, -sēf-) *a.* [Gk. *heteros*, other; *kephale*, head.] Having pistillate flowers on separate heads from staminate.

**heterocercal** (hēt'ērōsēr'kāl) *a.* [Gk. *heteros*, other; *kerkos*, tail.] Having vertebral column terminating in upper lobe of caudal fin, which is usually larger than lower.

**heterocercy** (hēt'ērōsēr'si) *n.* [Gk. *heteros*, other; *kerkos*, tail.] Condition of having a heterocercal tail.

**heterochlamydeous** (hēt'ērōklāmīd'ūs) *a.* [Gk. *heteros*, other; *chlamys*, cloak.] Having a calyx differing from corolla in colour, texture, etc.

**heterochromatic** (hēt'ērōkrōmāt'ik) *a.* [Gk. *heteros*, other; *chroma*, colour.] *Pert.* heterochromatin; *appl.* chromosomal regions liable to become heteropycnotic. *Opp.* euchromatic.

**heterochromatin** (hēt'ērōkrōmāt'in) *n.* [Gk. *heteros*, other; *chroma*, colour.] Chromatin retaining a high nucleic acid content and regulating nucleic acid metabolism in nucleus and cytoplasm.

**heterochromatism** (hēt'ērōkrōmāt-izm) *n.* [Gk. *heteros*, other; *chroma*, colour.] Change of colour, as seasonal colour change in an inflorescence.

**heterochromaty**,—differential staining.

**heterochromia** (hēt'ērōkrō'myā) *n.* [Gk. *heteros*, other; *chroma*, colour.] Difference in colour of parts normally of one colour, as of irides of a pair of eyes.

**heterochromosome** (hēt'ērōkrō'mō-sōm) *n.* [Gk. *heteros*, other; *chroma*, colour; *soma*, body.] A chromosome other than an ordinary or typical one; sex-chromosome; allosome. *Opp.* autosome, euchromosome.

**heterochromous** (hēt'ērōkrō'mūs) *a.* [Gk. *heteros*, other; *chroma*, colour.] Having disc and marginal florets differently coloured.

**heterochronism** (hēt'ērōk'rōnizm) *n.* [Gk. *heteros*, other; *chronos*, time.] Departure from typical sequence in time of formation of organs; heterochrony.

**heterochrosis** (hēt'ērōkrō'sis) *n.* [Gk. *heteros*, other; *chrosis*, colouring.] Abnormal coloration.

**heteroclinous** (hēt'ērōklī'nūs) *a.* [Gk. *heteros*, other; *kline*, bed.] Heterocephalous, *q.v.*

**heterocoelous** (hēt'ērōsē'lūs) *a.* [Gk. *heteros*, other; *koilos*, hollow.] *Pert.* vertebrae with saddle-shaped articulatory centra; concavoconvex.

**heterocysts** (hēt'ērōsists) *n. plu.* [Gk. *heteros*, other; *kystis*, bladder.] Clear cells occurring at intervals on filaments of certain algae, marking limits of hormogonia.

**heterodactylous** (hēt'ērōdāk'tilūs) *a.* [Gk. *heteros*, other; *daktylos*, digit.] With the first and second toes turned backwards.

**heterodont** (hēt'ērūdōnt) *a.* [Gk. *heteros*, other; *odous*, tooth.] Having the teeth differentiated for various purposes. *Opp.* homodont.

**heterodromous** (hēt'ērōd'rōmūs) *a.* [Gk. *heteros*, other; *dramein*, to run.] Having genetic spiral of stem leaves turning in different direction to that of branch leaves.

**heteroecious** (hēt'ērē'siūs) *a.* [Gk. *heteros*, other; *oikos*, house.] Passing different stages of life history in different hosts; exhibiting heteroecism; metoecious; metoxenous.

**heterogamete** (hēt'ērōgāmēt') *n.* [Gk. *heteros*, other; *gametes*, spouse.] One of dissimilar conjugating gametes; an anisogamete.

**heterogametic** (hēt'ērōgāmēt'ik) *a.* [Gk. *heteros*, other; *gametes*, spouse.] Elaborating two kinds of gametes in equal numbers; having unequal pair of sex chromosomes, XY or WZ; *appl.* sex that is heterozygous; reproducing sexually; digametic; *cf.* homogametic.

**heterogamous** (hêt'êrög'âmūs) *a.* [Gk. *heteros*, other; *gamos*, marriage.] With unlike gametes; having two types of flowers; having indirect pollination methods.

**heterogamy** (hêt'êrög'āmi) *n.* [Gk. *heteros*, other; *gamos*, offspring.] Alternation of two sexual generations, one being true sexual, the other parthenogenetic; condition of having, or union of, gametes of different size and structure; anisogamy.

**heterogangliate** (hêt'êrögāng'gliāt) *a.* [Gk. *heteros*, other; *gangglion*, ganglion.] With widely separated and asymmetrically placed nerve-ganglia.

**heterogenesis** (hêt'êröjén'esis) *n.* [Gk. *heteros*, other; *genesis*, descent.] Spontaneous generation; alternation of generations.

**heterogenetic** (hêt'êröjénēt'ik) *a.* [Gk. *heteros*, other; *genesis*, descent.] Descended from different ancestral stock; *pert.* heterogenesis.

**heterogeny** (hêt'êröj'ēni) *n.* [Gk. *heteros*, other; *genos*, generation.] Having several distinct generations succeeding one another in a regular series.

**heterogonic** (hêt'êrögōn'ik) *a.* [Gk. *heteros*, other; *gonos*, produce.] Differing in developmental or growth rate; allometric.

**heterogonous** (hêt'êrög'ōnūs) *a.* [Gk. *heteros*, other; *gonos*, birth.] *Pert.* heterogenesis, or heterogony.

**heterogony** (hêt'êrög'ōni) *n.* [Gk. *heteros*, other; *gonos*, birth.] Condition of having two, or three, kinds of flowers differing in length of stamen; alternation of generations; allometry, *q.v.*

**heterogynous** (hêt'êröj'inūs) *a.* [Gk. *heteros*, other; *gyne*, woman.] With two types of females.

**heterokaryon** (hêt'êrökār'ion) *n.* [Gk. *heteros*, other; *karyon*, nucleus.] An individual having heterokaryotic cells.

**heterokaryosis** (hêt'êrökär'ios'is) *n.* [Gk. *heteros*, other; *karyon*, nucleus.] Presence of genetically dissimilar nuclei within individual cells; heterokaryotic condition.

**heterokaryote** (hêt'êrökār'iot) *a.* [Gk. *heteros*, other; *karyon*, nucleus.] Having two distinct types of nuclei.

**heterokaryotic** (hêt'êrökär'iot'ik) *a.* [Gk. *heteros*, other; *karyon*, nucleus.] Having genetically dissimilar nuclei, in a multinucleate cell, or in different cells of a hypha; heterokaryote.

**heterokinesis** (hêt'êrökīnē'sis) *n.* [Gk. *heteros*, other; *kinein*, to move.] Qualitative or differential division of chromosomes.

**heterolecithal** (hêt'êrölēs'ithāl) *a.* [Gk. *heteros*, other; *lekithos*, yolk.] Having unequally distributed deutoplasm.

**heterologous** (hêt'êröl'ögūs) *a.* [Gk. *heteros*, other; *logos*, relation.] Of different origin; derived from a different species; *appl.* various substances, *e.g.* agglutinins, affecting other than species of origin; *cf.* homologous.

**heterology** (hêt'êröl'oji) *n.* [Gk. *heteros*, other; *logos*, relation.] Non-correspondence of parts owing to different origin or different elements.

**heteromallous** (hêt'êrömāl'ūs) *a.* [Gk. *heteros*, other; *mallos*, lock of wool.] Spreading in different directions.

**heteromastigate** (hêt'êrömās'tigāt) *a.* [Gk. *heteros*, other; *mastix*, lash.] Having two different types of flagella; heteromastigote.

**heteromerous** (hêt'êrömērūs) *a.* [Gk. *heteros*, other; *meros*, part.] Having, or consisting of, an unequal number of parts, *appl.* whorls, tarsi, etc.; having a stratified thallus.

**heterometabolic** (hêt'êrömētābōl'ik) *a.* [Gk. *heteros*, other; *metabole*, change.] Having incomplete metamorphosis.

**heteromorphic** (hêt'êrömôr'fik) *a.* [Gk. *heteros*, other; *morphe*, shape.] Having different forms at different times; *appl.* chromosomes of different size and shape, or chromosome pairs differing in size; *appl.* alternation of diploid and haploid phases in morphologically dissimilar generations, antithetic.

**heteromorphism** (hët'ërômôr'fizm) *n.* [Gk. *heteros*, other; *morphe*, shape.] The state or quality of being heteromorphic.

**heteromorphosis** (hët'ërômôr'fôsis) *n.* [Gk. *heteros*, other; *morphosis*, shaping.] Production of a part in an abnormal position; regeneration, when the new part is different from that removed; *cf.* homoeosis.

**heteromorphous** (hët'ërômôr'fûs) *a.* [Gk. *heteros*, other; *morphe*, shape.] *Pert.* an irregular structure, or departure from the normal.

**heteronereis** (hët'ërônē'rëis) *n.* [Gk. *heteros*, other; *Nereis*, Nereid.] A free-swimming dimorphic sexual stage of Nereis and other marine worms.

**heteronomous** (hët'ërôn'ômûs) *a.* [Gk. *heteros*, other; *nómos*, law.] Subject to different laws of growth; specialised on different lines. [Gk. *heteros*, other; *nomós*, department.] *Appl.* segmentation into dissimilar segments.

**heteropelmous** (hët'ëröpēl'mûs) *a.* [Gk. *heteros*, other; *pelma*, sole of foot.] Having flexor tendons of toes bifid.

**heteropetalous** (hët'ëröpēt'älûs) *a.* [Gk. *heteros*, other; *petalon*, petal.] With dissimilar petals.

**heterophagous** (hët'ërôf'ägûs) *a.* [Gk. *heteros*, other; *phagein*, to eat.] Having young in altrices condition.

**heterophil** (hët'ërôfil) *a.* [Gk. *heteros*, other; *philos*, loving.] *Appl.* non-specific antigens and antibodies present in an organism, affording natural immunity; *appl.* granular leucocytes which show interspecific differences in their reaction to stains. *n.* Polymorphonuclear leucocyte.

**heterophyadic** (hët'ërôfiäd'ík) *a.* [Gk. *heteros*, other; *phyas*, shoot.] Producing separate shoots, one vegetative, one reproductive.

**heterophyllous** (hët'ërôfil'ûs) *a.* [Gk. *heteros*, other; *phyllon*, leaf.] Bearing foliage leaves of different shape on different parts of the same plant.

**heterophytic** (hët'ërôff'tik) *a.* [Gk. *heteros*, other; *phyton*, plant.] With two kinds of spores, borne by different sporophytes; *cf.* homophytic.

**heteroplasia** (hët'ërôplä'siä) *n.* [Gk. *heteros*, other; *plassein*, to mould.] The development of one tissue from another of a different kind.

**heteroplasm** (hët'ërôpläzm) *n.* [Gk. *heteros*, other; *plasma*, mould.] Tissue formed in abnormal places.

**heteroplasma** (hët'ërôpläzmä) *n.* [Gk. *heteros*, other; *plasma*, mould.] Plasma from a different species used as a medium for tissue culture; *cf.* autoplasm, homoplasm.

**heteroplastic** (hët'ërôpläs'tik) *a.* [Gk. *heteros*, other; *plastos*, formed.] *Appl.* grafts of unrelated material; *appl.* transplantation between individuals of different species or genera, *opp.* homioplasmic; *cf.* xenoplastic.

**heteroploid** (hët'ërôploid) *a.* [Gk. *heteros*, other; *haploos*, onefold.] Having an extra chromosome through non-disjunction of a pair in meiosis; not having a multiple of the basic haploid number of chromosomes. *n.* An organism having heteroploid nuclei.

**heteroproteose** (hët'ërôprô'tëôs) *n.* [Gk. *heteros*, other; *protos*, first.] One of primary products formed by action of gastric juices on other hydrolysing agents on proteins; propeptone.

**heteropycnosis** (hët'ërôpiknô'sis) *n.* [Gk. *heteros*, other; *pyknos*, dense.] Condensation of sex-chromosome during growth-period stages of gonidia and cytes; condition of chromosome region or of chromosomes synthesising more or less nucleic acid than remainder of chromosome set.

**heteropycnotic** (hët'ërôpiknôt'ík) *a.* [Gk. *heteros*, other; *pyknos*, dense.] *Appl.* chromosome manifesting heteropycnosis.

**heterorhizal** (hët'ërôri'zäl) *a.* [Gk. *heteros*, other; *rhiza*, root.] With roots coming from no determinate point.

**heterosexual** (hët'ërösëk'süäl) *a.*

[Gk. *heteros*, other; *L. sexus*, sex.]  
Of, or *pert.* the opposite sex; *appl.*  
hormones, etc.

**heterosis** (hët'erös'sis) *n.* [Gk. *heteros*, other.] Cross-fertilisation; hybrid vigour, result of heterozygosis

**heterosomal** (hët'ërös'ömäl) *a.* [Gk. *heteros*, other; *soma*, body.] Occurring in, or *pert.*, different bodies; *appl.* rearrangements in two or more chromosomes of a set.

**heterosome** (hët'ërös'öm) *n.* [Gk. *heteros*, other; *soma*, body.] A heterochromosome.

**heterosporangic** (hët'ërös'pörän'jik) *a.* [Gk. *heteros*, other; *sporos*, seed; *angeion*, vessel.] Bearing two kinds of spores in separate sporangia.

**heterosporous** (hët'ërös'pörüs, hët'ërös'pörüs) *a.* [Gk. *heteros*, other; *sporos*, seed.] Producing two kinds of spores; heterosporic.

**heterosporous** (hët'ërös'pörüs, hët'ërös'pörüs) *a.* [Gk. *heteros*, other; *sporos*, seed.] Producing two kinds of spores; heterosporic.

**heterosporous** (hët'ërös'pörüs, hët'ërös'pörüs) *a.* [Gk. *heteros*, other; *sporos*, seed.] Producing two kinds of spores; heterosporic.

**heterostrophy** (hët'ërös'tröfi) *n.* [Gk. *heteros*, other; *strophe*, turning.] The condition of being coiled in a direction opposite to normal.

**heterostyled** (hët'ërösti'ld) *a.* [Gk. *heteros*, other; *stylos*, pillar.] Having unlike or unequal styles; heterostylic.

**heterostyly** (hët'ërösti'li) *n.* [Gk. *heteros*, other; *stylos*, pillar.] Condition of being heterostyled.

**heterosynapsis** (hët'ërös'inäp'sis) *n.* [Gk. *heteros*, other; *synapsis*, union.] Pairing of two dissimilar chromosomes; *cf.* homosynapsis.

**heterotaxis** (hët'ërötäk'sis) *n.* [Gk. *heteros*, other; *taxis*, arrangement.] Abnormal or unusual arrangement of organs or parts.

**heterothallic** (hët'ëröthäl'ik) *a.* [Gk. *heteros*, other; *thallos*, young

shoot.] Requiring branches of two distinct mycelia to form a zygospore; *appl.* moulds; *cf.* homothallic.

**heterotic** (hët'ëröt'ik) *a.* [Gk. *heteros*, other.] *Pert.* heterosis; *appl.* vigour.

**heterotomy** (hët'ëröt'ömi) *n.* [Gk. *heteros*, other; *temnein*, to cut.] Condition of having parts of perianth whorls unequal or dissimilar; irregular dichotomy in Crinoidea.

**heterotopy** (hët'ëröt'öpi) *n.* [Gk. *heteros*, other; *topos*, place.] Displacement; abnormal habitat.

**heterotrichous** (hët'ëröt'riküs) *a.* [Gk. *heteros*, other; *thrix*, hair.] Having two types of cilia; having thallus consisting of prostrate and erect filaments, as certain algae.

**heterotrophic** (hët'ëröt'röf'ik) *a.* [Gk. *heteros*, other; *trophe*, nourishment.] Getting nourishment from organic substances; *appl.* parasitic plants; *opp.* autotrophic.

**heterotropic chromosome**, — sex-chromosome, *q.v.*

**heterotropous** (hët'ëröt'röpüs) *a.* [Gk. *heteros*, other; *trepein*, to turn.] *Pert.* ovule with hilum and micropyle at opposite ends in a plane parallel to placenta; heterotropic.

**heterotype** (hët'ëröt'ip) *n.* [Gk. *heteros*, other; *typos*, pattern.] First meiotic division.

**heterotypic** (hët'ëröt'ip'ik) *a.* [Gk. *heteros*, other; *typos*, pattern.] *Pert.* mitotic division in which daughter chromosomes remain united and form rings; *appl.* first or reduction division in meiosis; *cf.* homeotypic.

**heterotypical** (hët'ëröt'ip'ikäl) *a.* [Gk. *heteros*, other; *typos*, pattern.] *Appl.* a genus comprising species that are not truly related.

**heteroxenous** (hët'ërözén'üs) *a.* [Gk. *heteros*, other; *xenos*, host.] Occurring on or infesting more than one kind of host; heteroecious.

**heterozygosis** (hët'ërözigō'sis) *n.* [Gk. *heteros*, other; *zygon*, yoke.] Descent from two different species, varieties, or races.

**heterozygote** (hêt'êrozî'gôt) *n.* [Gk. *heteros*, other; *zygon*, yoke.] An organism having alternative forms of a gene; an impure dominant; a heterozygous organism.

**heterozygous** (hêtêroz'igûs) *a.* [Gk. *heteros*, other; *zygon*, yoke.] Bearing two dissimilar alternative genetic factors.

**hexacanth** (hêk'sākānth) *a.* [Gk. *hex*, six; *akantha*, thorn.] Having six hooks; *appl.* embryo of certain flat-worms.

**hexactinal** (hêk'sāk'tināl) *a.* [Gk. *hex*, six; *aktis*, ray.] With six rays.

**hexactine** (hêk'sāk'tin) *n.* [Gk. *hex*, six; *aktis*, ray.] A spicule with six equal and similar rays meeting at right angles.

**hexactinian** (hêk'sāktin'īān) *a.* [Gk. *hex*, six; *aktis*, ray.] With tentacles or mesenteries in multiples of six.

**hexacyclic** (hêk'sāsī'klīk) *a.* [Gk. *hex*, six; *kyklos*, circle.] Having floral whorls consisting of six parts.

**hexagynous** (hêksāj'inûs) *a.* [Gk. *hex*, six; *gyne*, woman.] Having six pistils.

**hexamerous** (hêksām'crûs) *a.* [Gk. *hex*, six; *meros*, part.] Occurring in sixes, or arranged in sixes.

**hexandrous** (hêksān'drûs) *a.* [Gk. *hex*, six; *aner*, man.] Having six stamens.

**hexapetaloid** (hêk'sāpêt'āloid) *a.* [Gk. *hex*, six; *petalon*, petal; *eidos*, form.] With petaloid perianth of six parts.

**hexapetalous** (hêk'sāpêt'ālûs) *a.* [Gk. *hex*, six; *petalon*, petal.] Having six petals.

**hexaphyllous** (hêk'sāfil'ûs) *a.* [Gk. *hex*, six; *phyllon*, leaf.] Having six leaves.

**hexaploid** (hêk'sāploid) *a.* [Gk. *hex*, six; *haploos*, simple; *eidos*, form.] With six sets of chromosomes. *n.* An organism having six times the monoploid chromosome number.

**hexapod** (hêk'sāpōd) *a.* [Gk. *hex*, six; *pous*, foot.] *Pert.* animal with six legs. *n.* An insect.

**hexapterous** (hêksāp'têrûs) *a.* [Gk. *hex*, six; *pteron*, wing.] Having six wing-like processes or expansions.

**hexarch** (hêk'sârk) *a.* [Gk. *hex*, six; *arche*, beginning.] Having six radiating vascular strands; *appl.* roots.

**hexasepalous** (hêk'sāsêp'ālûs) *a.* [Gk. *hex*, six; F. *sépale*, sepal.] Having six sepals.

**hexaspermous** (hêk'sāspêr'mûs) *a.* [Gk. *hex*, six; *sperma*, seed.] Having six seeds.

**hexastemonous** (hêk'sāstêm'ônûs) *a.* [Gk. *hex*, six; *stemon*, stamen.] Having six stamens; hexandrous.

**hexaster** (hêksās'têr) *n.* [Gk. *hex*, six; *aster*, star.] A variety of hexactine in which the rays branch and produce star-shaped figures.

**hexastichous** (hêksās'tīkûs) *a.* [Gk. *hex*, six; *stichos*, row.] Having the parts arranged in six rows.

**hexicology** (hêk'sīkōl'ōjī) *n.* [Gk. *hexis*, habit; *logos*, discourse.] *Bionomics.*

**hexuronic acid**,—ascorbic acid or vitamin C.

**hiatus** (hiā'tûs) *n.* [L. *hiare*, to gape.] Any large opening.

**hibernaculum** (hī'bêrnāk'ûlûm) *n.* [L. *hibernaculum*, winter-quarters.] A winter bud; specially modified winter bud in fresh-water Polyzoa.

**hibernate** (hī'bêrnāt) *v.* [L. *hibernus*, wintry.] To pass the winter in a resting state.

**hibernating glands**,—lymph glands of richly vascularised fatty tissue occurring in some rodents and insectivores.

**hidrosis** (hidrō'sis) *n.* [Gk. *hidros*, sweat.] Excretion of sweat; perspiration.

**hiemal** (hī'êmāl) *a.* [L. *hiems*, winter.] *Pert.* winter; *appl.* aspect of a community.

**Highmore's antrum** [*N. Highmore*, English surgeon]. The maxillary sinus, which communicates with the middle meatus of the nose.

**Highmore's body**,—corpus highmoreanum, mediastinum testis.

**hiliferous** (hilif'ērūs) *a.* [L. *hilum*, trifle; *ferre*, to carry.] Having a hilum.

**hilum** (hī'lūm) *n.* [L. *hilum*, trifle.] Scar on ovule where it was attached to placenta; eye of seed; nucleus of starch grain; small notch, opening, or depression, usually where vessels, nerves, etc., enter, of kidney, lung, spleen, etc.; also hilus.

**hind brain**,—rhombencephalon, that portion of brain derived from third embryonic vesicle.

**hind gut**,—diverticulum of yolk-sac extending into tail-fold in human embryo; posterior portion of alimentary tract.

**hinge-cells**,—large epidermal cells which, by changes in turgor, control rolling and unrolling of a leaf.

**hinge-joint**,—a joint in which articulatory surfaces are so moulded as to permit motion in one plane only; ginglymus.

**hinge-ligament**,—the tough elastic substance joining the two valves of a bivalve shell.

**hinge-line**,—the line of articulation of the two valves in a bivalve shell.

**hinge-tooth**,—one of the projections found on the hinge-line in bivalves.

**hip-joint**,—the ball-and-socket joint between femur and hip-girdle.

**hippocampal** (hīp'ōkām'pāl) *a.* [Gk. *hippos*, horse; *kampē*, bend.] *Pert.* the hippocampus.

**hippocampus** (hīp'ōkām'pūs) *n.* [Gk. *hippos*, horse; *kampē*, bend.] Part of rhinencephalon forming an eminence extending throughout length of floor of inferior cornu of lateral ventricle.

**hippuric** (hīpūr'ik) *a.* [Gk. *hippos*, horse; *ouron*, urine.] Obtained from horse's urine; *appl.* acid synthesised by kidney and present in urine of herbivorous animals.

**hirsute** (hīrsūt') *a.* [L. *hirsutus*, hairy.] Covered with hair-like feathers, *appl.* birds; having stiff, hairy bristles or covering.

**hirudin** (hīrū'din) *n.* [L. *hirudo*, leech] A substance, obtained in solution from buccal glands of leech, which prevents clotting of blood by inhibiting action of 'thrombin on fibrinogen.

**His' bundle** [W. *His*, German anatomist]. Band of muscle fibres, with nerve fibres, connecting auricles and ventricles of heart; atrioventricular or auriculoventricular bundle; Gaskell's bridge.

**hispid** (hīs'pid) *a.* [L. *hispidus*, rough.] Having stiff hairs, spines, or bristles.

**histamine** (hīs'tāmin) *n.* [Gk. *histos*, tissue; *ammoniakon*, resinous gum.] Product of the basic amino acid and food constituent histidine, in ergot and animal tissues, stimulates autonomic nervous system, gastric juice secretion, and capillary dilatation;  $C_8H_9N_3$ .

**histiocyte** (hīs'tiōsīt) *n.* [Gk. *histon*, tissue; *kytos*, hollow.] A primitive blood cell giving rise to a monocyte; a monocyte of reticular origin, or a clasmatoocyte derived from endothelium, a reticulo-endothelial cell; fixed macrophage in loose connective tissue; adventitial cell; rhagiocrine cell.

**histiomonocyte** (hīs'tiōmōn'ōsīt) *n.* [Gk. *histon*, tissue; *monos*, alone; *kytos*, hollow.] An endothelial cell of certain capillaries and associated with the histiocytic metabolic system.

**histiotypic** (hīs'tiōtīp'ik) *a.* [Gk. *histon*, tissue; *typos*, pattern.] *Appl.* uncontrolled or unorganised growth of cells, in tissue culture. *Opp.* organotypic.

**histoblast** (hīs'tōblāst) *n.* [Gk. *histos*, tissue; *blastos*, bud.] A unit of tissue; imaginal disc.

**histochemistry** (hīs'tōkēm'īstri) *n.* [Gk. *histos*, tissue; *chemeia*, transmutation.] The chemistry of animal tissues.

**histocyte** (hīs'tōsīt) *n.* [Gk. *histos*, tissue; *kytos*, hollow.] Tissue cell as distinguished from germ cell.

**histogenesis** (his'tōjēn'ēsis) *n.* [Gk. *histos*, tissue; *genesis*, descent.] Formation and development of tissue.

**histogenic** (his'tōjēn'ik) *a.* [Gk. *histos*, tissue; *-genes*, producing.] Tissue-producing; *appl.* the separate merismatic layers in a stratified growing point.

**histogens** (his'tōjēnz) *n. plu.* [Gk. *histos*, tissue; *gennaein*, to produce.] Tissue-producing zones or layers: *plerome*, *periblem*, *dermatogen*, and *calyptrogen*.

**histohaematin** (his'tōhēm'ätin) *n.* [Gk. *histos*, tissue; *haima*, blood.] An intracellular haemin compound; a cytochrome.

**histology** (histōl'ōji) *n.* [Gk. *histos*, tissue; *logos*, discourse.] The science which treats of the detailed structure of animal or plant tissues; microscopic morphology; *histomorphology*.

**histolysis** (histōl'isis) *n.* [Gk. *histos*, tissue; *lyein*, to dissolve.] The dissolution of organic tissues; process by which most of pupal internal organs dissolve into creamy fluid, except certain cells round which new imaginal tissues are formed.

**histone** (his'tōn) *n.* [Gk. *histos*, tissue.] A protein constituent of cell nuclei, thymus, blood corpuscles, and lymph glands.

**histophyly** (histōfī'li) *n.* [Gk. *histos*, tissue; *phyle*, tribe.] Phylogenetic history of a group of cells.

**histoteleosis** (his'tōtēlē'ōsis) *n.* [Gk. *histos*, tissue; *teleios*, full-grown.] The completion of functional differentiation of tissue cells.

**histotrophic** (his'tōtrōf'ik) *a.* [Gk. *histos*, tissue; *trephein*, to nourish.] *Pert.* or connected with tissue formation or repair.

**histozoic** (his'tōzō'ik) *a.* [Gk. *histos*, tissue; *zoon*, animal.] Living within tissues; *appl.* trophozoitic stage of certain Sporozoa.

**histozyme** (his'tōzim) *n.* [Gk. *histos*, tissue; *zyme*, leaven.] An enzyme found in kidneys of certain animals, capable of decomposing hippuric acid.

**hock** (hōk) *n.* [A.S. *hoh*, heel.] The tarsal joint, or its region; *hough*.

**holandric** (hōlän'drik) *a.* [Gk. *holos*, whole; *aner*, male.] *Pert.* holandry; transmitted from male to male through the Y-chromosome; *appl.* sex-linked characters.

**holandry** (hōlän'dri) *n.* [Gk. *holos*, whole; *aner*, male.] The condition of having full number of testes, as two pairs in *Oligochaeta*; *cf.* *meroandry*.

**holarctic** (hōlärk'tik) *a.* [Gk. *holos*, whole; *Arktos*, Great Bear.] *Appl.* or *pert.* a zoogeographical region including northern parts of the Old and New Worlds or palaeartic and nearctic sub-regions, *q.v.*

**holard** (hōlär'd) *n.* [Gk. *holos*, whole; *ardo*, I water.] Total water content of soil; *cf.* *chresard*, *echard*.

**holaspidean** (hōl'äspid'ēän) *a.* [Gk. *holos*, whole; *äspis*, shield.] With single series of large scales on posterior aspect of tarso-metatarsus.

**holcodont** (hōl'kōdōnt) *a.* [Gk. *holkos*, furrow; *odous*, tooth.] Having the teeth in a long continuous groove.

**holdfast**,—the sucker or disc on the thallus of certain algae; *hapteron*.

**holobasidium** (hōl'ōbäs'id'ium) *n.* [Gk. *holos*, whole; *basis*, base; *idion*, *dim.*] A basidium not divided by septa.

**holobenthic** (hōl'obēn'thik) *a.* [Gk. *holos*, whole; *benthos*, depths.] Living in depths of sea throughout life.

**holoblastic** (hōl'ōbläs'tik) *a.* [Gk. *holos*, whole; *blastos*, bud.] *Pert.* eggs with total cleavage.

**holobranch** (hōl'ōbrängk) *n.* [Gk. *holos*, whole; *branchia*, gills.] A gill in which gill filaments are borne on both sides.

**holocarpic** (hōl'ōkär'pik) *a.* [Gk. *holos*, whole; *karpos*, fruit.] *Appl.* fungi without rhizoids or haustoria. living in host cell, as certain *Phycomycetes*; *cf.* *eucarpic*.

**Holocene** (hōl'ōsēn) *a.* [Gk. *holos*, whole; *kainos*, recent.] Recent

geological epoch following Pleistocene; postglacial age.

**holochlamydate** (höl'öklām'ídāt) *a.* [Gk. *holos*, whole; *chlamys*, cloak.] Having no notch on mantle margin.

**holochroal** (höl'ökrö'äl) *a.* [Gk. *holos*, whole; *chros*, close.] Having eyes with globular or biconvex lenses closely crowded together, so that cornea is continuous over whole eye.

**holocrine** (höl'ökrīn) *a.* [Gk. *holos*, whole; *krinein*, to separate.] *Appl.* glands in which secretory cells disintegrate and form part of secretion, as sebaceous glands; *cf.* apocrine, merocrine.

**holocyclic** (höl'ösīk'lik) *a.* [Gk. *holos*, whole; *kyklos*, circle.] *Pert.* or completing alternation of sexual and parthenogenetic generations.

**hologametes** (höl'ögāmēts') *n. plu.* [Gk. *holos*, whole; *gametes*, spouse.] Fully developed protozoa taking part in syngamy. *Opp.* merogametes.

**hologamy** (hölög'āmī) *n.* [Gk. *holos*, whole; *gamos*, marriage.] Macro-gamy; condition of having gametes similar to somatic cells.

**hologastrula** (höl'ögās'troolä) *n.* [Gk. *holos*, whole; *gaster*, stomach.] Gastrula formed from holoblastic egg.

**holognathous** (hölög'näthūs) *a.* [Gk. *holos*, whole; *gnathos*, jaw.] Having the jaw in a single piece.

**hologynic** (hölöjīn'ik) *a.* [Gk. *holos*, whole; *gynē*, woman.] Transmitted direct from female to female; *appl.* sex-linked characters.

**holomastigote** (höl'ömäs'tīgöt) *a.* [Gk. *holos*, whole; *mastix*, whip.] Having one type of flagellum scattered evenly over the body.

**holometabolic** (höl'ömētäböl'ik) *a.* [Gk. *holos*, whole; *metabole*, change.] Having complete metamorphosis.

**holometabolism** (höl'ömētäb'öllizm) *n.* [Gk. *holos*, whole; *metabole*, change.] State of having complete

metamorphosis. *Opp.* hemimetabolism.

**holomorphosis** (höl'ömör'fösīs) *n.* [Gk. *holos*, whole; *morphe*, shape.] Regeneration in which the entire part is replaced.

**holonephridia**,—meganephridia, *q.v.*

**holonephros** (höl'önéf'rös) *n.* [Gk. *holos*, whole; *nephros*, kidney.] The hypothetical continuous excretory organ.

**holophytic** (höl'öfīt'ik) *a.* [Gk. *holos*, whole; *phyton*, plant.] Obtaining the whole of its food after the manner of a plant; phototrophic. *Opp.* holozoic.

**holoplankton** (höl'öplängktōn) *n.* [Gk. *holos*, whole; *plangkton*, wandering.] The marine or fresh-water organisms which complete their life cycle while drifting with the surrounding water.

**holoplanktonic** (höl'öplängktōn'ik) *a.* [Gk. *holos*, whole; *plangkton*, wandering.] Living near the surface of sea, or of lake, throughout life; *pert.* holoplankton.

**holopneustic** (höl'önū'stik) *a.* [Gk. *holos*, whole; *pnein*, to breathe.] With all spiracles open for respiration.

**holoptic** (hölöp'tik) *a.* [Gk. *holos*, whole; *ops*, eye.] Having eyes of two sides meeting in a coadapted line of union.

**holorhinal** (höl'örī'näl) *a.* [Gk. *holos*, whole; *rhis*, nose.] Having nares with posterior margin rounded. *Opp.* schizorhinal.

**holoschisis** (hölös'kīsīs) *n.* [Gk. *holos*, whole; *schizein*, to cut.] Amitosis.

**holosericeous** (höl'ösērīsh'ūs) *a.* [Gk. *holos*, whole; *L.L. sericeus*, silken.] Completely covered with silky hairlike structures; having a silky lustre or sheen.

**holostomatous** (höl'östöm'ätūs) *a.* [Gk. *holos*, whole; *stoma*, mouth.] With margin of aperture entire.

**holostyly** (höl'östī'li) *n.* [Gk. *holos*, whole; *stylos*, pillar.] Primitive condition of jaw suspension in some fishes.



**holosystolic** (höl'ösistöl'ík) *a.* [Gk. *holos*, whole; *systole*, contraction.] *Pert.* complete systole.

**holotrichous** (hölöt'rikūs) *a.* [Gk. *holos*, whole; *thrix*, hair.] Having a uniform covering of cilia over the body.

**holotype** (höl'ötíp) *n.* [Gk. *holos*, whole; *typos*, pattern.] The single specimen chosen for designation of a new species.

**holozoic** (höl'özō'ík) *a.* [Gk. *holos*, whole; *zoon*, animal.] Obtaining the whole of its food after the manner of animals; ingulphing proteids. *Opp.* holophytic.

**homacanth** (höm'ákānth) *a.* [Gk. *homos*, same; *akantha*, spine.] Having spines of dorsal fin symmetrical.

**homaxon** (hömāk'sōn) *a.* [Gk. *homos*, same; *axon*, axis.] Built up around equal axes; hom-axonic.

**homeo-**, *also* homoeo-, homioio-

**homeokinesis** (höm'ëökīnē'sis) *n.* [Gk. *homoiōs*, alike; *kinein*, to move.] Mitosis with equal division of chromatinic elements to daughter nuclei.

**homeostasis** (hömëös'tāsīs) *n.* [Gk. *homoiōs*, alike; *stasis*, standing.] The constancy of the internal environment of the body, as in birds and mammals.

**homeosynapsis**,—homosynapsis, *q.v.*

**homeotely** (höm'ëöt'ēli) *n.* [Gk. *homoiōs*, alike; *telos*, end.] Evolution from homologous parts, but with less close resemblance.

**homeotypic** (höm'ëötíp'ík) *a.* [Gk. *homoiōs*, alike; *typos*, character.] *Appl.* second division in meiosis, similar to typical mitosis; *cf.* heterotypic.

**homeozoic** (höm'ëözō'ík) *a.* [Gk. *homoiōs*, alike; *zoon*, animal.] *Pert.* a region or series of regions with identical fauna.

**homoblastic** (höm'öblās'tík) *a.* [Gk. *homos*, same; *blastos*, bud.] Having direct embryonic development; arising from similar cells.

**homobrachial** (höm'öbrā'kiāl) *a.* [Gk. *homos*, same; L. *brachium*,

*arm.*] *Pert.* the same chromosome arm; paracentric.

**homocarpous** (höm'ökâr'pūs) *a.* [Gk. *homos*, same; *karpōs*, fruit.] Bearing one kind of fruit.

**homocellular** (höm'ösēl'ūlar) *a.* [Gk. *homos*, same; L. *cellula*, small cell.] Composed of cells of one type only. *Opp.* heterocellular.

**homocercal** (höm'ösēr'kāl) *a.* [Gk. *homos*, same; *kerkos*, tail.] Having a tail with equal or nearly equal lobes, and axis ending near middle of base.

**homocerebrin** (höm'ösēr'ēbrin) *n.* [Gk. *homos*, same; L. *cerebrum*, brain.] A substance identical with cerebrin.

**homochlamydeous** (höm'ökläm'dē-ūs) *a.* [Gk. *homos*, same; *chlamys*, cloak.] Having outer and inner perianth whorls alike.

**homochromous** (höm'ökrō'mūs) *a.* [Gk. *homos*, same; *chroma*, colour.] Of one colour; *appl.* capitular florets.

**homochronous** (hömök'rōnūs) *a.* [Gk. *homos*, same; *chronos*, time.] Occurring at the same age or period, in successive generations.

**homodermic** (höm'ödēr'mík) *a.* [Gk. *homos*, same; *derma*, skin.] Sprung from same embryonic layer.

**homodont** (höm'mödōnt) *a.* [Gk. *homos*, same; *odous*, tooth.] Having the teeth all alike, not differentiated. *Opp.* heterodont.

**homodromous** (hömöd'rōmūs) *a.* [Gk. *homos*, same; *dramein*, to run.] Having genetic spiral alike in direction in stem and branches.

**homodynamic** (höm'ödīnām'ík) *a.* [Gk. *homos*, same; *dynamis*, power.] Developing without resting stages; *appl.* insects not requiring a diapause for further development; *pert.* homodynamy.

**homodynamy** (höm'ödī'nāmī) *n.* [Gk. *homos*, same; *dynamis*, power.] Metameric homology.

**homoeandrous** (hömëän'drūs) *a.* [Gk. *homoiōs*, alike; *aner*, male.] Having uniform stamens.

**homoeo-**,—*also* homeo, homioio.

**homoeologous** (hõmëöl'ögüs) *a.*

[Gk. *homoios*, like; *logos*, relation.]

*Appl.* chromosomes having in part the same sequence of genes; partly homologous.

**homoeologue**, — *a* homoeologous chromosome.

**homoeomorphic** (hõm'ëömôr'fik) *a.*

[Gk. *homoios*, like; *morphe*, form.]

Resembling in shape or structure; exhibiting convergence.

**homoeosis** (hõmë'õsis) *n.* [Gk.

*homoiosis*, likeness.] Assumption

by one part of likeness to another part, as modification of antenna into foot, or of petal into stamen; metamorphy.

**homoeotype** (hõm'ëõtíp) *n.* [Gk.

*homoios*, alike; *typos*, pattern.]

A specimen authoritatively stated to be identical with the holotype, lectotype, paratypes, or syntypes of its species.

**homoeozoic** (hõ'mëözõ'ik) *a.* [Gk.

*homoios*, alike; *zoe*, life.] Char-

acterised by similar forms of life; *appl.* areas or zones.

**homogametic** (hõm'ögämët'ik) *a.*

[Gk. *homos*, same; *gametes*,

spouse.] Having homogametes or gametes of one type; *appl.* sex possessing two X-chromosomes; *cf.* heterogametic, digametic.

**homogamous** (hõmög'ämüs) *a.* [Gk.

*homos*, same; *gamos*, marriage.]

Characterised by homogamy.

**homogamy** (hõmög'ämi) *a.* [Gk.

*homos*, same; *gamos*, marriage.]

Inbreeding due to some type of isolation; condition of having flowers all alike, having stamens and pistils mature at same time.

**homogangliate** (hõm'ögäng'lîät) *a.*

[Gk. *homos*, same; *ganglion*, knot.]

Having ganglia of nerve loops symmetrically arranged.

**homogen** (hõ'möjën) *n.* [Gk. *homos*,

same; *genos*, race.] One of a

group having a common origin; one of a series of identically derived parts.

**homogenesis** (hõm'õjën'ësis) *n.* [Gk.

*homos*, same; *genesis*, descent.]

The type of reproduction in which like begets like.

**homogenetic** (hõm'õjënët'ik) *a.* [Gk.

*homos*, same; *genesis*, descent.]

*Pert.* homogenesis; *appl.* pairing of homologous chromosomes.

**homogenous** (hõmõj'ënüs) *a.* [Gk.

*homos*, same; *genos*, race.] More

or less alike owing to descent from common stock; *appl.* graft from another animal of same species.

**homogeny** (hõmõj'ëni) *n.* [Gk.

*homos*, same; *genos*, race.] Cor-

respondence between parts due to common descent; the same genotypical structure; homogeneity.

**homogony** (hõmög'õni) *n.* [Gk. *homos*,

same; *gonos*, offspring.] Condition

of having one type of flower with equally long stamens and pistil.

**homoio**, — *also* homeo-, homoeo-

**homoiomorous** (homoïöm'ërüs) *a.*

[Gk. *homoios*, like; *meros*, part.]

Having algae distributed equally through fungoid mycelium in a lichen.

**homoioplastic** (hõmoi'öpläs'tik) *a.*

[Gk. *homoios*, like; *plastos*,

formed.] *Appl.* transplantation between individuals of the same species; homeoplastic.

**homoiosmotic** (hõmoi'õsmõt'ik) *a.*

[Gk. *homoios*, like; *osmos*, im-

pulse.] *Appl.* organisms with constant internal osmotic pressure; euryhaline, *q.v.*

**homoiothermal** (hõmoi'öthër'mäl) *a.*

[Gk. *homoios*, like; *thermos*, hot.]

Having a more or less constant body temperature; warm-blooded; homoeothermal, homoiothermic, homothermal, homothermic, homothermous.

**homoiotransplantation**, — transplan-

tation of tissue or organ from one organism to another, possibly unrelated; *cf.* autotransplantation.

**homolecithal** (hõm'ölës'ithäl) *a.* [Gk.

*homos*, same; *lekithos*, yolk.] Hav-

ing little deutoplasm, which is equally distributed.

**homologous** (hõmöl'ögüs) *a.* [Gk.

*homologos*, agreeing.] Resembling

in structure and origin; *appl.*

- various substances, *e.g.* agglutinins affecting organisms of same species only; *appl.* chromosomes with the same sequence of genes; *appl.* genes determining the same character, *e.g.* eye colour. *Cf.* heterologous, antithetic.
- homologue** (hôm'ölög) *n.* [Gk. *homologos*, agreeing.] One of a series of structures similar in structure and origin; a homologous agent.
- homology** (hômöl'öjī) *a.* [Gk. *homologia*, agreement.] Similarity in structure and development of organ or parts.
- homomallous** (hôm'ömäl'üs) *a.* [Gk. *homos*, same; *mallos*, lock of wool.] Curving uniformly to one side; *appl.* leaves.
- homomorphic** (hôm'ômôr'fik) *a.* [Gk. *homos*, same; *morphe*, form.] Of similar size or structure; *pert.*, or exhibiting, homomorphism; *appl.* chromosome pairs; *cf.* heteromorphic.
- homomorphism** (hôm'ômôr'fizm) *n.* [Gk. *homos*, same; *morphe*, shape.] The condition of having perfect flowers of only one type; hemimetabolism; similarity of larva and adult.
- homomorphosis** (hôm'ômôr'fösis) *n.* [Gk. *homos*, same; *morphosis*, shaping.] Condition of having a newly regenerated part like the part removed.
- homonomic** (hômönöm'ik) *a.* [Gk. *homos*, same; *nomos*, law.] Having the same behaviour; *appl.* affinity, as of tissues combining, *e.g.* vascular anastomoses, or complementary affinity, as in adrenal medulla and cortex; homonomous, *q.v.*
- homonomous** (hômön'ömüs) *a.* [Gk. *homos*, same; *nomós*, department.] *Appl.* segmentation into similar segments. [Gk. *nomos*, law.] Following same stages or process, as of development or growth.
- homonymy** (hômön'ömi) *n.* [Gk. *homos*, same; *nomos*, law.] The homology existing between parts arranged on transverse axes; homodynamy.
- homonym** (hôm'önim) *n.* [Gk. *homos*, same; *onyma*, name.] A name preoccupied, and therefore unsuitable according to law of priority.
- homopetalous** (hôm'öpët'älüs) *a.* [Gk. *homos*, same; *petalon*, petal.] Having all the petals alike.
- homophyadic** (hôm'öffäd'ik) *a.* [Gk. *homos*, same; *phyas*, shoot.] Producing only one kind of shoot.
- homophylic** (hôm'öfil'ik) *a.* [Gk. *homos*, same; *phyle*, race.] Resembling one another owing to a common ancestry.
- homophyllous** (hôm'ofil'üs) *a.* [Gk. *homos*, same; *phyllon*, leaf.] Bearing leaves all of one kind.
- homophytic** (hôm'öfit'ik) *a.* [Gk. *homos*, same; *phyton*, plant.] With two kinds of spores, or one bisexual type, borne by a single sporophyte; *cf.* heterophytic.
- homoplasma** (hôm'öpláz'mä) *n.* [Gk. *homos*, same; *plasma*, mould.] Plasma from another animal of same species used as a medium for tissue culture; *cf.* autoplasma, heteroplasma.
- homoplast** (hôm'öpläst) *n.* [Gk. *homos*, same; *plastos*, moulded.] An organ or organism formed of similar plastids; coenobium; catallact.
- homoplastic** (hôm'öpläs'tik) *a.* [Gk. *homos*, same; *plastos*, moulded.] *Pert.* homoplasty; *appl.* graft made into individual of same species; *cf.* autoplastic.
- homoplasty** (hôm'öpläs'ti) *n.* [Gk. *homos*, same; *plastos*, moulded.] Convergence; resemblance in form of structure between different organs or organisms due to evolution along similar lines; also homoplasmy; isotely.
- homopterous** (hômöp'tërüs) *a.* [Gk. *homos*, same; *pteron*, wing.] Having the wings alike.
- homorhizal** (hôm'öri'zäl) *a.* [Gk. *homos*, same; *rhiza*, root.] Not having an antiapical root, as Pteridophyta. *Opp.* allorhizal.

**homosomal** (hôm'ôsô'mål) *a.* [Gk. *homos*, same; *soma*, body.] Occurring in, or *pert.*, the same body; *appl.* rearrangements restricted to a single chromosome.

**homosporangic** (hôm'ôspôrân'jik) *a.* [Gk. *homos*, same; *sporos*, seed; *anggeion*, vessel.] Bearing spores of one kind or of two kinds in one sporangium.

**homosporous** (hôm'ôspô'rûs) *a.* [Gk. *homos*, same; *sporos*, seed.] Producing only one kind of spore; homosporic; isosporous.

**homostyled** (hôm'ôstîld) *a.* [Gk. *homos*, same; *stylos*, pillar.] With uniform styles; homogonous.

**homosynapsis** (hôm'ôsinâp'sis) *n.* [Gk. *homos*, same; *synapsis*, union.] Pairing of two homologous chromosomes; *cf.* heterosynapsis.

**homotaxial** (hôm'ôtâk'siâl) *a.* [Gk. *homos*, same; *taxis*, arrangement.] Containing the same assemblage of species, *appl.* fossiliferous deposits.

**homotaxis** (hôm'ôtâk'sis) *n.* [Gk. *homos*, same; *taxis*, arrangement.] Similar assemblage or succession of species or types in different regions or strata, not necessarily contemporaneous.

**homothallic** (hôm'ôthâl'ik) *a.* [Gk. *homos*, same; *thallos*, young shoot.] Forming zygosporangia from two branches of the same mycelium; *appl.* moulds. *Opp.* heterothallic.

**homothermous**, — homoiothermal, *q.v.*

**homotropous** (hôm'ôt'ropûs) *a.* [Gk. *homos*, same; *trope*, turn.] Erect; having micropyle and chalaza at opposite ends; *appl.* ovules.

**homotypic** (hôm'ôtîp'ik) *a.* [Gk. *homos*, same; *typos*, pattern.] Homeotypic, *q.v.*; *pert.* or exhibiting homotypy.

**homotypy** (hôm'ôtîpî) *n.* [Gk. *homos*, same; *typos*, pattern.] Equality of structures along main axis of body; serial homology; reversed symmetry; enantiomorphic condition, *q.v.*

**homoxylous** (hôm'ôzi'lûs) *a.* [Gk. *homos*, same; *xylon*, wood.] *Appl.*

wood without vessels and consisting of tracheids.

**homozygosis** (hôm'ôzîgô'sis) *n.* [Gk. *homos*, same; *zygon*, yoke.] Condition of having a given genetical factor in the duplex condition, and producing gametes of only one kind as regards that factor.

**homozygote** (hôm'ôzî'gôt) *n.* [Gk. *homos*, same; *zygon*, yoke.] An organism in which characters are stable, resulting from union of gametes bearing similar genes.

**homozygous** (hôm'ôzî'gûs) *a.* [Gk. *homos*, same; *zygon*, yoke.] Having identical genes for a given character; exhibiting or *pert.* homozygosis; *pert.* homozygote.

**homunculus** (hômûn'kûlûs) *n.* [L. *homunculus*, little man.] The small miniature of human foetus supposed to be in spermatozoon, according to Animalculists; homonculus.

**honey-dew**, — a sugary exudation found on leaves of many plants; a viscous fluid secreted by mycelium of ergot; a sweet secretion produced by certain insects, *e.g.*, by aphids.

**hooded** (hood'êd) *a.* [A.S. *hōd*.] Bearing a hood-like petal; cucullate; rolled up like a cone of paper, as certain leaves; having head conspicuously and differently coloured from rest of body; having crests on head; having wing-shaped expansions on neck, as in cobra.

**hook-glands**, — paired longitudinal glands uniting anteriorly to form head gland in Pentastomida.

**hordeaceous** (hôr'dēā'shûs) *a.* [L. *hordeum*, barley.] *Pert.* or resembling barley.

**horiodimorphism** (hō'riôdimôr'fizm) *n.* [Gk. *horios*, in season; *dis*, twice; *morphe*, shape.] Seasonal dimorphism.

**horizon** (hōri'zôn) *n.* [Gk. *horizon*, bounding.] Soil layer of a more or less well-defined character; a layer of deposit characterised by definite fossil species and formed at a definite time.

**horizontal** (hōr'izōn'tāl) *a.* [Gk. *horizon*, bounding.] Growing in a plane at right angles to primary axis.

**horme** (hōr'mē) *n.* [Gk. *horme*, impetus.] Purposive behaviour; conation; urge or drive in living cells or organisms; élan vital.

**hormocyst** (hōr'mōsist) *n.* [Gk. *hormos*, chain; *kystis*, bladder.] A modified thick-walled hormogonium, in some blue-green algae.

**hormogonium** (hōr'mōgō'nium) *n.* [Gk. *hormos*, chain; *gone*, generation.] That portion of an algal filament between two heterocysts, which, breaking away, acts as a reproductive body; hormogone.

**hormones** (hōrmōnz) *n. plu.* [Gk. *hormaein*, to excite.] Substances normally produced in cells and necessary for the proper functioning of other distant cells to which they are conveyed and of the body as a whole; internal secretions of ductless glands which pass into blood vessels by osmosis; exciting agents, *opp.* chalones; internal secretions in plants, as auxins, *q.v.*

**hormonic** (hōrmōn'ik) *a.* [Gk. *hormaein*, to excite.] *Pert.* hormones; *appl.* excitatory internal secretions, *opp.* chalonic.

**hormoproteins** (hōr'mōprō'tēnz) *n. plu.* [Gk. *hormaein*, to excite; *protos*, first.] Proteins or protein derivatives secreted by endocrines.

**horn** (hōrn) *n.* [A.S. *horn*.] The process on head of many animals; any projection resembling a horn; anterior part of each uterus when posterior parts are united to form median corpus uteri; a tuft of feathers as in owl; a spine in fishes; a tentacle in snails; an awn; any pointed projection or process in plants; cornu.

**horn core**,—the os cornu, fusing with frontal bone, over which fits hollow horn of ruminants.

**horodimorphism**, — horiodimorphism, *q.v.*

**horotelic** (hōrōtē'ik) *a.* [Gk. *hora*,

right time; *telos*, fulfilment.] Evolving at the standard rate; *cf.* bradytelic, tachytelic.

**host** (hōst) *n.* [L. *hostis*, stranger.] Any organism in which another organism spends part or the whole of its existence, and from which it derives nourishment or gets protection; an organism which receives grafted or transplanted tissue.

**house** (hows) *n.* [A.S. *hūs*.] The external gelatinous-like covering secreted by certain tunicates.

**Houston's valves** [*J. Houston*, Irish surgeon]. Semilunar transverse folds of mucous membrane in the rectum; plicae transversales recti.

**humeral** (hū'mērāl) *a.* [L. *humerus*, shoulder.] *Pert.* shoulder region; *pert.* the anterior basal angle of insect wing, *appl.* a cross vein; one of horny plates on plastron of chelonians.

**humerus** (hū'mērūs) *n.* [L. *humerus*, shoulder.] The bone of the upper arm.

**humistratous** (hū'mīstrā'tūs) *a.* [L. *humus*, soil; *sternere*, to spread.] Spreading over surface of ground.

**humoral** (hū'mōrāl) *a.* [L. *humor*, moisture.] *Appl.* theory of immunity ascribing to body fluids the power to resist infection.

**humour** (hū'mōr) *n.* [L. *humor*, moisture.] Any fluid or juice; the fluid of the eye.

**humus** (hū'mūs) *n.* [L. *humus*, earth.] A dark material formed by decomposition of vegetable or animal matter and constituting organic part of soils.

**husk** (hūsk) *n.* [M.E. *huske*.] The outer coating of various seeds.

**Huxley's layer** [*T. H. Huxley*, English zoologist]. The middle layer of polyhedral cells in inner root-sheath of hair.

**hyaline** (hī'āln) *a.* [Gk. *hyalos*, glass.] Clear; transparent; free from inclusions.

**hyalodermis** (hī'ālōdēr'mis) *n.* [Gk. *hyalos*, glass; *derma*, skin.] Tissue of large, empty and absorptive cells in Sphagnum.

**hyalogen** (hí'álöjën) *n.* [Gk. *hyalos*, glass; *-genes*, producing.] Any of substances found in animal tissues which are insoluble and related to mucoids.

**hyaloid** (hí'áloid) *a.* [Gk. *hyalos*, glass; *eidos*, form.] Glassy; transparent.

**hyaloid artery**,—from central artery of retina through hyaloid canal to back of lens, in foetal eye.

**hyaloid canal**,—through vitreous body of eye, from optic nerve to back of lens.

**hyaloid fossa**,—anterior concavity of vitreous body, receptacle of crystalline lens.

**hyaloid membrane**,—delicate membrane enveloping vitreous body of eye.

**hyalomere** (hí'älömër) *n.* [Gk. *hyalos*, glass; *meros*, part.] The clear homogeneous part of a blood platelet, *opp.* chromomere.

**hyalomucoid** (hí'älömū'koid) *n.* [Gk. *hyalos*, glass; L. *mucus*, mucus; Gk. *eidos*, like.] One of the non-phosphorised gluco - proteids in vitreous humour.

**hyaloplasm** (hí'älöplāzm) *n.* [Gk. *hyalos*, glass; *plasma*, mould.] Ground substance of cell as distinguished from microsomes, or from reticulum or spongioplasm, ectoplasm or peripheral zone in plant cells; also hyaloplasma.

**hyalopterous** (hí'älöp'tërüs) *a.* [Gk. *hyalos*, glass; *pteron*, wing.] Having transparent wings.

**hyalosome** (hí'älösöm) *n.* [Gk. *hyalos*, glass; *soma*, body.] A nucleolar-like body in a cell-nucleus, only slightly stainable by nuclear or plasma stains.

**hyalosporous** (hí'älöspō'rüs, hí'älös'-pō'rüs) *a.* [Gk. *hyalos*, glass; *sporos*, seed.] Having colourless spores or conidia.

**hybrid** (hí'bríd) *n.* [L. *hibrida*, cross.] Any cross-bred animal or plant; heterozygote. *a.* Cross-bred; heterozygous.

**hybrid incapacitation**,—hybrid sterility and inviability, inclusively.

**hybridisation** (hí'brídzā'shün) *n.* [L. *hibrida*, cross.] Act or process of hybridising; state of being hybridised; cross-fertilisation.

**hybridise** (hí'brídz) *v.* [L. *hibrida*, cross.] To interbreed, to cross, to produce hybrids.

**hybridism** (hí'brídzím) *n.* [L. *hibrida*, cross.] The state or quality of being a hybrid.

**hydathode** (hí'däthöd) *n.* [Gk. *hydatos*, of water; *hodos*, way.] An epidermal structure specialised for secretion, or for exudation, of water; water stoma.

**hydatid** (hí'dätíd) *n.* [Gk. *hydatis*, watery vesicle.] Any vesicle or sac filled with clear watery fluid; sac containing encysted stages of larval tapeworms; vestige of Müllerian duct constituting appendix of testis, hydatid of Morgagni; stalked appendix of epididymis.

**hydatiform** (hí'dätíförm) *a.* [Gk. *hydatis*, watery vesicle; L. *forma*, shape.] Resembling a hydatid.

**hydatigenous** (hí'dätij'énüs) *a.* [Gk. *hydatis*, watery vesicle; *-genes*, producing] Producing or forming hydatids.

**hydranth** (hí'drānth) *n.* [Gk. *hydor*, water; *anthos*, flower.] A nutritive zooid in a hydroid colony.

**hydrarch** (hí'drárk) *n.* [Gk. *hydor*, water; *arche*, beginning.] *Appl.* seres progressing from hydric towards mesic conditions.

**hydric** (hí'drík) *a.* [Gk. *hydor*, water.] Characterised by an abundant supply of moisture, *appl.* plants, environment.

**hydrocaulis** (hí'drököl'ís) *n.* [Gk. *hydor*, water; L. *caulis*, stalk.] The branching vertical portion of coenosarc in a hydroid colony.

**hydrocircuit** (hí'drösēr'küš) *n.* [Gk. *hydor*, water; *kirkos*, circle.] The hydrocoelic ring surrounding mouth in echinoderms.

**hydrocladia** (hí'drö'klā'diā) *n. plu.* [Gk. *hydor*, water; *klados*, shoot.] The secondary branches of a hydrocaulis.

**hydrocoel** (hī'drōsēl) *n.* [Gk. *hydor*, water; *koilos*, hollow.] The water-vascular system in echinoderms.

**hydrocryptophyte**, — hydrophyte, *q.v.*

**hydrocyst** (hī'drōsīst) *n.* [Gk. *hydor*, water; *kystis*, bladder.] A dactylo-zoid.

**hydroecium** (hīdrē'siūm) *n.* [Gk. *hydor*, water; *oikos*, house.] A closed tube at upper end of a siphonophore; an infundibulum.

**hydroid** (hī'droid) *n., a.* [Gk. *hydor*, water; *eidos*, form.] Elongated empty cell in central cylinder of mosses; a tracheid; the polyp of Hydrozoa.

**hydrolysis** (hīdrōl'īsis) *n.* [Gk. *hydor*, water; *lyein*, to dissolve.] The reaction between a chemical compound and the hydrogen and hydroxyl ions of water.

**hydrome** (hī'drōm) *n.* [Gk. *hydor*, water; *mestos*, full.] Any tissue that conducts water; also hydrom.

**hydromegatherm** (hī'drōmēg'āthērm) *n.* [Gk. *hydor*, water; *megas*, great; *therme*, heat.] A plant which must have much moisture and heat to develop fully.

**hydromorphic** (hīdrōmōr'fik) *a.* [Gk. *hydor*, water; *morphe*, form.] Structurally adapted to an aquatic environment, as organs of water plants.

**hydronasty** (hī'drōnās'tī) *n.* [Gk. *hydor*, water; *nastos*, close-pressed.] Plant movement induced by changes in atmospheric humidity.

**hydrophilous** (hī'drōf'ilūs) *a.* [Gk. *hydor*, water; *philein*, to love.] Pollinated through agency of water.

**hydraphoric** (hī'drōfōr'ik) *a.* [Gk. *hydrophoros*, carrying water.] *Appl.* canal, the madreporic or stone canal, *q.v.*

**hydrophyllium** (hī'drōf'il'iūm) *n.* [Gk. *hydor*, water; *phyllon*, leaf.] One of leaf-like transparent bodies arising above and partly covering the sporosacs in a siphonophore.

**hydrophyte** (hī'drōfīt) *n.* [Gk. *hydor*, water; *phyton*, plant.] An aquatic plant; *cf.* hygrophyte.

**hydrophyton** (hīdrōfītōn) *n.* [Gk. *hydor*, water; *phyton*, plant.] A complete hydroid colony, root-like organ, stem and branches.

**hydroplanula** (hī'drōplān'ulā) *n.* [Gk. *hydor*, water; L. *planus*, flat.] Stages between planula and actinula in larval history of coelenterates.

**hydropolyp** (hī'drōpōl'ip) *n.* [Gk. *hydor*, water; F. *polype*, polyp.] A polyp of a hydroid colony; a hydrula.

**hydroponics** (hī'drōpōn'iks) *n.* [Gk. *hydor*, water; *ponos*, exertion.] The science and art of crop production in liquid culture media; *cf.* water culture.

**hydropore** (hī'drōpōr) *n.* [Gk. *hydor*, water; *poros*, opening.] The opening into right hydrocoel in echinoderm larvae.

**hydropote** (hī'drōpōt) *n.* [Gk. *hydropotes*, water drinker.] A cell or cell-group, in some submerged leaves, easily permeable by water and salts.

**hydropyle** (hī'drōpilē) *n.* [Gk. *hydor*, water; *pyle*, gate.] Specialised area in cuticular membrane of embryo, for passage of water, as in grasshoppers.

**hydrorhabd** (hī'drōrābd) *n.* [Gk. *hydor*, water; *rhabdos*, rod.] A rhabdosome, in graptolites.

**hydrorhiza** (hī'drōrīzā) *n.* [Gk. *hydor*, water; *rhiza*, root.] The creeping root-like portion of coenosarc of a hydroid colony.

**hydrosere** (hī'drōsēr) *n.* [Gk. *hydor*, water; L. *serere*, to put in a row.] A plant succession originating in a wet environment.

**hydrosome** (hī'drōsōm) *n.* [Gk. *hydor*, water; *soma*, body.] The conspicuously hydra-like stage in a coelenterate life-history; hydrosoma.

**hydrospire** (hī'drōspīr) *n.* [Gk. *hydor*, water; L. *spira*, coil.] The folds on the stereom of blastoids, being respiratory structures.

**hydrostatic** (hí'dröstát'ík) *a.* [Gk. *hydor*, water; *statikos*, causing to stand.] *Appl.* organs of flotation, as air sacs in aquatic larvae of insects.

**hydrostome** (hí'dröstóm) *n.* [Gk. *hydor*, water; *stoma*, mouth.] The mouth of a hydroid polyp.

**hydrotaxis** (hí'drôták'sís) *n.* [Gk. *hydor*, water; *taxis*, arrangement.] Response of organisms to stimulus of moisture.

**hydrotheca** (hí'dröthē'kā) *n.* [Gk. *hydor*, water; *theke*, cup.] Cup-like structure into which the polyp may withdraw, in many coelenterates.

**hydrotropic** (hí'drötörp'ík) *a.* [Gk. *hydor*, water; *trope*, turn.] *Appl.* curvature of a plant organ towards a greater degree of moisture.

**hydrotropism** (hí'dröt'röplizm) *n.* [Gk. *hydor*, water; *trepein*, to turn.] Response to stimulus of water.

**hydrula** (hí'droolā) *n.* [Gk. *hydor*, water.] Hypothetical simple polyp.

**hyetal** (hí'ētāl) *a.* [Gk. *hyetos*, rain.] *Pert.* rain; *pert.* precipitation.

**hygiene** (hí'jēn) *n.* [Gk. *hygieinos*, healthful.] That part of biology dealing with health preservation.

**hygric** (hí'grík) *a.* [Gk. *hygros*, wet.] Humid; tolerating, or adapted to, humid conditions. *Opp.* xeric.

**hygrochasy** (hí'grökā'sí) *n.* [Gk. *hygros*, wet; *chasis*, separation.] Dehiscence of seed vessels when induced by moisture; *cf.* xerochasy.

**hygrokinesis** (hí'grökínē'sís) *n.* [Gk. *hygros*, wet; *kinesis*, movement.] Movement in response to change in humidity.

**hygrophilous** (hí'gröf'ilūs) *a.* [Gk. *hygros*, wet; *philein*, to love.] Inhabiting moist or marshy places.

**hygrophyte** (hí'gröfít) *n.* [Gk. *hygros*, wet; *phyton*, plant.] A plant which thrives in plentiful moisture; *cf.* hydrophyte.

**hygroplasm** (hí'gröplāzm) *n.* [Gk. *hygros*, wet; *plasma*, mould.] The more liquid part of protoplasm, *opp.* stereoplasm.

**hygroscopic** (hí'grösköp'ík) *a.* [Gk. *hygros*, wet; *skopein*, to regard.] Sensitive to, or retaining, moisture.

**hylion** (hí'lliön) *n.* [Gk. *hyle*, wood; *on*, being.] Forest climax; hylum.

**hylophagous** (hí'löf'ägüs) *a.* [Gk. *hyle*, wood; *phagein*, to eat.] Eating wood; *appl.* certain insects.

**hylophyte** (hí'löfít) *n.* [Gk. *hyle*, wood; *phyton*, plant.] A plant growing in woods.

**hylotomous** (hí'löt'ömüs) *a.* [Gk. *hyle*, wood; *temnein*, to cut.] Wood-cutting; *appl.* certain insects.

**hymen** (hí'mēn) *n.* [Gk. *hymen*, membrane.] Thin fold of mucous membrane at orifice of vagina.

**hymenial** (hímē'niāl) *a.* [Gk. *hymen*, skin.] *Pert.* hymenium.

**hymeniferous** (hí'mēníf'ērüs) *a.* [Gk. *hymen*, skin; *L. ferre*, to carry.] Having a hymenium.

**hymenium** (hímē'nium) *n.* [Gk. *hymen*, skin.] The outermost layer of mushroom lamellae, or of other fungi, consisting of spore-producing cells interspersed with barren cells or paraphyses.

**hymenophore** (hí'mēnöföör) *n.* [Gk. *hymen*, skin; *pherein*, to carry.] The hymenial portion of sporophore of a fungus.

**hymenopterous** (hí'mēnöp'tērüs) *a.* [Gk. *hymen*, skin; *pteron*, wing.] Having membranous wings; *appl.* certain insects.

**hyobranchial** (hí'öbräng'kiäl) *a.* [Gk. *Y*; *branchia*, gills.] *Pert.* hyoid and branchial arches.

**hyoepiglottic** (hí'öepiglot'ík) *a.* [Gk. *Y*; *epi*, upon; *glotta*, tongue.] Connecting hyoid and epiglottis.

**hyoglossal** (hí'öglös'äl) *a.* [Gk. *Y*; *glossa*, tongue.] *Pert.* tongue and hyoid; *appl.* membrane and muscle.

**hyoid** (hí'oid) *a.* [Gk. *hyoeides*, Y-shaped.] *Pert.* or designating a bone or series of bones lying at base of tongue and developed from hyoid arch of embryo; *appl.* a sclerite enclosing pharynx in some insects; hyoidean. *n.* The hyoid bone.



**hyoidean** (hioid'éän) *a.* [Gk. *hyooides*, Y-shaped.] *Pert.* or associated with the hyoid arch or bone; *appl.* a branch of first efferent branchial vessel, or of lingual artery; *appl.* nerve, the posterior post-trematic nerve.

**hyoideus** (hioid'éüs) *n.* [Gk. *hyooides*, Y-shaped.] A nerve which supplies mucosa of mouth and muscles of hyoid region.

**hyomandibular** (hi'ómändib'ülär) *a.* [Gk. *Y*; L. *mandibulum*, jaw.] *Pert.* hyoid and mandible; *pert.* dorsal segment of hyoid arch in fishes.

**hyomental** (hi'ómén'täl) *a.* [Gk. *Y*; L. *mentum*, chin.] *Pert.* hyoid and chin.

**hyoplastron** (hi'öpläs'trön) *n.* [Gk. *Y*; F. *plastron*, breast-plate.] The second lateral plate in plastron of Chelonia.

**hyostapes** (hi'östä'pēz) *n.* [Gk. *Y*; L. *L. stapes*, stirrup.] Lower portion of columellar primordium which gives rise to part of columella in some reptiles.

**hyosternum** (hi'östēr'nüm) *n.* [Gk. *Y*; *sternon*, breast.] Hyoplastron.

**hyostylic** (hi'östil'ik) *a.* [Gk. *Y*; *stylos*, pillar.] Having jaw articulated to skull by hyomandibular or corresponding part; exhibiting hyostyly; *cf.* autostylic.

**hyosymplecticum** (hi'ösimplēk'ti-kūm) *n.* [Gk. *Y*; *symplektos*, plaited together.] The cartilaginous primordium from which hyomandibular and symplecticum are derived.

**hyothyroid** (hi'öthi'roid) *a.* [Gk. *Y*; *thyreos*, shield; *eidos*, like.] *Pert.* hyoid bone and thyroid cartilage of larynx; *appl.* ligaments, membrane.

**hypallelomorph** (hīp'älēl'ómōrf) *n.* [Gk. *hypos*, under; *allelon*, of one another; *morphe*, form.] Allelomorphs which under certain conditions are themselves compound.

**hypandrium** (hīpän'driūm) *n.* [Gk. *hypos*, under; *aner*, male.] Subgenital plate or ninth abdominal sternite of certain insects.

**hypanthium** (hīpän'thiūm) *n.* [Gk. *hypos*, under; *anthos*, flower.] Any enlargement of the torus.

**hypanthodium** (hīp'ānthō'diūm) *n.* [Gk. *hypos*, under; *anthodes*, like flowers.] An inflorescence with concave capitulum on whose walls the flowers are arranged.

**hypantrum** (hīpän'trūm) *n.* [Gk. *hypos*, under; *antron*, cave.] Notch on vertebrae of certain reptiles for articulation with hyosphene.

**hypapophysis** (hīp'āpōf'isis) *n.* [Gk. *hypos*, under; *apo*, upon; *phyein*, to grow.] A ventral process on a vertebral centrum.

**hyparterial** (hīp'ärtē'riäl) *a.* [Gk. *hypos*, under; L. *arteria*, artery.] Situated below an artery; *appl.* branches of bronchi below pulmonary artery.

**hypaxial** (hīpāk'siäl) *a.* [Gk. *hypos*, under; L. *axis*, axis.] Ventral; below vertebral column; *appl.* muscles.

**hyperapophysis** (hī'pērāpōf'isis) *n.* [Gk. *hyper*, above; *apo*, from; *phyein*, to grow.] A postero-lateral process of dorsal side of vertebra.

**hyperchromasy** (hī'pērkrō'māsī) *n.* [Gk. *hyper*, above; *chroma*, colour.] A relatively superabundant supply of chromatin to cytoplasm in a cell.

**hyperchromatosis** (hī'pērkrō'mātō-sis) *n.* [Gk. *hyper*, above; *chroma*, colour.] Excess of nuclear substance in a cell previous to division.

**hypercoracoid** (hī'pērkrō'ākoid) *a.* [Gk. *hyper*, above; *korax*, crow; *eidos*, form.] *Pert.* or designating upper bone at base of pectoral fin in fishes.

**hypercyesis** (hī'pērsiē'sis) *n.* [Gk. *hyper*, above; *kyesis*, conception.] Superfoetation; additional fertilisation in a mammal already pregnant.

**hyperfeminisation**,—condition of a feminised male with female characteristics exaggerated, as in small size and weight.

**hypergamesis** (hī'pērgāmē'sis) *n.* [Gk. *hyper*, above; *gamos*, marriage.] Process of absorption by female of excess spermatozoa.

**hypermasculinisation**, — condition of a masculinised female with male characteristics exaggerated, as in large proportions, appearance of male secondary sexual characters.

**hypermetamorphosis** (hī'pērmēt'ā-mōr'fōsis) *n.* [Gk. *hyper*, above; *meta*, after; *morphosis*, shaping.] A protracted and thoroughgoing metamorphosis; metamorphosis involving two or more distinct types of larval instar, in certain insects.

**hypermorphosis** (hī'pērmōr'fōsis) *n.* [Gk. *hyper*, above; *morphosis*, shaping.] The development of additional characters, in comparison with the adult ancestral stage.

**hyperparasite** (hī'pērpār'āsīt) *n.* [Gk. *hyper*, above; *para*, beside; *sitos*, food.] A parasite which is parasitic on or in another parasite.

**hyperphalangy** (hī'pērfāl'ānji) *n.* [Gk. *hyper*, above; *phalangx*, line of battle.] Condition of having digits with more than normal number of phalanges.

**hyperpituitarism** (hī'pērpitū'itārlzm) *n.* [Gk. *hyper*, above; *L. pituita*, phlegm.] Overaction of pituitary gland, resulting in gigantism or giantism; hyperhypophysisism.

**hyperplasia** (hī'pērlā'siā) *n.* [Gk. *hyper*, above; *plassein*, to mould.] Overgrowth; excessive or hyperplastic development due to increase in number of cells; *cf.* hypertrophy.

**hyperploid** (hī'pērploid) *a.* [Gk. *hyper*, above; *haploos*, onefold; *eidos*, form.] Aneuploid with extra chromosomes, *opp.* hypoploid.

**hyperpnoea** (hī'pērpne'ā) *n.* [Gk. *hyper*, above; *pnoe*, breath.] Rapid breathing due to insufficient supply of oxygen.

**hypersensitivity** (hī'pērsēn'sitiv'itī) *n.* [Gk. *hyper*, above; *L. sentire*, to feel.] A condition of being unduly sensitive to a stimulus.

**hypertely** (hīpēr'tēli) *n.* [Gk. *hyper*, above; *telos*, end.] Excessive imitation in colour or pattern, being of problematical utility; overdevelopment, as canines of Babirusa; hypertelia.

**hypertensin**,—angiotonin, *q.v.*

**hypertonia** (hī'pērtō'nīā) *n.* [Gk. *hyper*, above; *tonos*, tone.] Excessive tonicity.

**hypertrophy** (hīpēr'trōfi) *n.* [Gk. *hyper*, above; *trophē*, nourishment.] Excessive growth due to increase in size of cells; *cf.* hyperplasia.

**hypha** (hī'fā) *n.* [Gk. *hyphē*, web.] The thread-like element or filament of vegetative mycelium of a fungus; filamentous cell in medulla of an algal thallus.

**hyphasma** (hīfāz'mā) *n.* [Gk. *hyphasma*, thing woven.] A barren mycelium; an Agaricus thallus.

**hypodrome** (hī'fōdrōm) *a.* [Gk. *hyphē*, web; *dromos*, course.] Running throughout the tissues; *appl.* thick leaves where veins are not visible from surface.

**hyphopodium** (hīfōpō'diūm) *n.* [Gk. *hyphē*, web; *pous*, foot.] A hyphal branch with enlarged terminal cell or haustorium for attaching the hypha, as in some Ascomycetes.

**hypnocyst** (hīp'nōsīt) *n.* [Gk. *hypnos*, sleep; *kystis*, bladder.] Cyst in which contained organism simply rests; dormant cyst.

**hypnody** (hīp'nōdī) *n.* [Gk. *hypnodia*, sleepiness.] The long resting period of certain larval forms.

**hypnogenic** (hīp'nōjēn'ik) *a.* [Gk. *hypnos*, sleep; *-genes*, producing.] Sleep-inducing; *appl.* influences which tend to produce hypnosis.

**hypnosperm** (hīp'nōspērm) *n.* [Gk. *hypnos*, sleep; *sperma*, seed.] A hypnosperm.

**hypnosporangium** (hīp'nōspōrān'-jiūm) *n.* [Gk. *hypnos*, sleep; *sporos*, seed; *angeion*, vessel.] A sporangium containing resting spores.

**hypnospor** (hīp'nōspōr) *n.* [Gk. *hypnos*, sleep; *sporos*, seed.] A resting spore; a zygote that remains in a quiescent condition during winter.

**hypnote** (hīp'nōt) *n.* [Gk. *hypnos*, sleep.] An organism in a dormant condition.

**hypoachene** (hī'pōākēn') *n.* [Gk. *hypo*, under; *a*, not; *chainein*, to

gape.] Achene developed from an inferior ovary.

**hypoarion** (hí'pōā'riōn) *n.* [Gk. *hypo*, under; *oarion*, little egg.] A small lobe below the optic lobes of most teleosts.

**hypobasal** (hí'pōbā'sāl) *n.* [Gk. *hypo*, under; *basis*, base.] The lower segment of a developing ovule, which ultimately gives rise to the root. *Opp.* epibasal.

**hypoblast** (hí'pōblāst) *n.* [Gk. *hypo*, under; *blastos*, bud.] The inner germ layer in a gastrula.

**hypoblastic** (hí'pōblās'tik) *a.* [Gk. *hypo*, under; *blastos*, bud.] *Pert.*, or derived from, the inner layer; endodermal.

**hypobranchial** (hí'pōbrāng'kiāl) *a.* [Gk. *hypo*, under; *branchia*, gills.] *Pert.* lower or fourth segment of branchial arch.

**hypocentrum** (hí'pōsēn'trūm) *n.* [Gk. *hypo*, under; *kentron*, centre.] A transverse cartilage that arises below nerve cord and forms part of vertebral centrum.

**hypocercal** (hí'pōsēr'kāl) *a.* [Gk. *hypo*, under; *kerkos*, tail.] Having notochord terminating in lower lobe of caudal fin.

**hypochilium** (hí'pōki'līūm) *n.* [Gk. *hypo*, under; *cheilos*, lip.] The lower portion of lip of an orchid.

**hypochondrium** (hí'pōkōn'driūm) *n.* [Gk. *hypo*, under; *chondros*, cartilage.] A region lateral to epigastric and above lumbar.

**hypochord** (hí'pōkōrd) *n.* [Gk. *hypo*, under; *chorde*, cord.] A transitory subnotochordal rod in anamniotes.

**hypochordal** (hí'pōkōr'dāl) *a.* [Gk. *hypo*, under; *chorde*, cord.] Below the notochord; *appl.* lower lobe of caudal fin; *appl.* bar of mesodermal tissue developing into ventral arch of atlas and amalgamating with fibrocartilages in other cervical vertebrae.

**hypocleidium** (hí'pōkliđi'ūm) *n.* [Gk. *hypo*, under; *kleis*, key; *idion*, *dim.*] The interclavicle.

**hypocone** (hí'pōkōn) *n.* [Gk. *hypo*, under; *konos*, cone.] Postero-

internal cusp of upper molar; the part posterior to girdle in Dinoflagellata, *opp.* epicone.

**hypocoonid** (hí'pōkō'nid) *n.* [Gk. *hypo*, under; *konos*, cone.] Postero-buccal cusp of lower molar.

**hypocoonule** (hí'pōkōn'ül) *n.* [Gk. *hypo*, under; *konos*, cone.] Fifth or distal cusp of upper molar.

**hypocoonulid** (hí'pōkōn'ülid) *n.* [Gk. *hypo*, under; *konos*, cone.] Postero-mesial cusp of lower molar.

**hypocoracoid** (hí'pōkōr'ākoid) *a.* [Gk. *hypo*, under; *korax*, crow; *eidos*, like.] *Pert.* lower bone at base of pectoral fin in fishes.

**hypocotyl** (hí'pōkōt'il) *n.* [Gk. *hypo*, under; *kotyle*, cup.] That portion of stem below cotyledons in an embryo.

**hypocotyledonary** (hí'pōkōt'ilē'dōn-ārī) *a.* [Gk. *hypo*, under; *kotyledon*, hollow.] Below the cotyledons.

**hypocrateriform** (hí'pōkrātēr'ifōrm) *a.* [Gk. *hypo*, under; *krater*, bowl; *L. forma*, shape.] Saucer-shaped; having a gamopetalous corolla with long narrow tube, and limbs at right angles to tube; hypocraterimorphous.

**hypodactylum** (hí'pōdāk'tilūm) *n.* [Gk. *hypo*, under; *daktylos*, digit.] The under surface of a bird's toes.

**hypoderma** (hí'pōdēr'mā) *n.* [Gk. *hypo*, under; *derma*, skin.] Hypodermis or tissue just under epidermis in plants.

**hypodermal** (hí'pōdēr'māl) *a.* [Gk. *hypo*, under; *derma*, skin.] *Pert.* hypoderma; *pert.* hypodermis.

**hypodermalia** (hí'pōdērmā'liā) *n. plu.* [Gk. *hypo*, under; *derma*, skin.] Sponge spicules situated just below the derma or skin.

**hypodermic** (hí'pōdēr'mik) *a.* [Gk. *hypo*, under; *L. dermis*, skin.] *Pert.* parts just under the skin.

**hypodermis** (hí'pōdēr'mis) *n.* [Gk. *hypo*, under; *L. dermis*, skin.] The cellular layer lying beneath and secreting the cuticle of Annulata, Arthropoda, etc.; hypoblast, *q.v.*; hypoderma, *q.v.*

**hypodicrotic** (hí'pōdikrōt'ík) *a.* [Gk. *hypo*, under; *di*, two; *krotein*, to beat.] Having two arterial beats for the one cardiac.

**hypogastric** (híp'ōgās'trík) *a.* [Gk. *hypo*, under; *gaster*, stomach.] *Pert.* lower median region of abdomen; *appl.* artery, vein, plexus, etc.

**hypogastrium** (híp'ōgās'tríūm) *n.* [Gk. *hypo*, under; *gaster*, stomach.] Lower median region of abdomen.

**hypogastroid**,—hypoischium, *q.v.*

**hypogeal** (hí'pōjē'āl) *a.* [Gk. *hypo*, under; *ge*, earth.] Underground; *appl.* stems, etc.; also hypogean.

**hypogenesis** (hí'pōjēn'ēsís) *n.* [Gk. *hypo*, under; *genesis*, origin.] Development without occurrence of alternation of generations.

**hypogenous** (hípōj'ēnūs) *a.* [Gk. *hypo*, under; *-genes*, produced.] Growing on lower surface of anything.

**hypogeous** (hí'pōjē'ūs) *a.* [Gk. *hypo*, under; *ge*, earth.] Growing or maturing under earth's surface.

**hypoglossal** (hí'pōglōs'āl) *n.* [Gk. *hypo*, under; *glossa*, tongue.] The twelfth paired cranial nerve, distributed to base of tongue.

**hypoglottis** (hí'pōglōt'ís) *n.* [Gk. *hypo*, under; *glōtta*, tongue.] The under part of tongue; a division of labium of beetles.

**hypognathous** (hípōg'nāthūs) *a.* [Gk. *hypo*, under; *gnathos*, jaw.] Having the lower jaw slightly longer than the upper.

**hypogynium** (hí'pōjín'itūm) *n.* [Gk. *hypo*, under; *gyne*, female.] Structure supporting ovary in such plants as sedges.

**hypogynous** (hípōj'inūs) *a.* [Gk. *hypo*, under; *gyne*, female.] Inserted below the gynoeceum, and not adherent; immediately below oogonium, *appl.* antheridium, as in some Peronosporales.

**hypohyal** (hí'pōhí'āl) *n.* [Gk. *hypo*, under; *hyooides*, Y-shaped.] The hyoid element lying between ceratohyal and basihyal.

**hypoischium** (hí'pōis'kiūm) *n.* [Gk. *hypo*, under; *ischion*, hip.] A

small bony rod passing backwards from ischiadic symphysis and supporting ventral cloacal wall; hypogastroid; os cloacae.

**hypolemmal** (hí'pōlēm'āl) *a.* [Gk. *hypo*, under; *lemma*, peel.] Beneath the sarcolemma; *appl.* arborisation of an axis cylinder in a motor plate.

**hypolimnion** (hí'pōlimni'ōn, -lim'nyōn) *n.* [Gk. *hypo*, under; *limnaios*, stagnant; *limne*, marshy lake.] The water between the thermocline and bottom of lakes. *Opp.* epilimnion.

**hypomeral** (hí'pōm'erāl) *a.* [Gk. *hypo*, under; *meros*, part.] Hypomeric; *appl.* slender bones among lower trunk muscles in some fishes.

**hypomere** (hí'pōmēr) *n.* [Gk. *hypo*, under; *meros*, part.] Lower or lateral plate zone of coelomic pouches.

**hypomeron** (hípōm'erōn) *n.* [Gk. *hypo*, under; *meros*, part.] The lateral inflexed side of a coleopterous prothorax.

**hypomorph** (hí'pōmōrf) *n.* [Gk. *hypo*, under; *morphe*, form.] A gene having a smaller effect than its wild-type allelomorph.

**hyponasty** (hí'pōnāsti) *n.* [Gk. *hypo*, under; *nastos*, close-pressed.] The state of growth in a flattened structure in which the under surface grows more vigorously than the upper.

**hyponeural** (hí'pōnū'rāl) *a.* [Gk. *hypo*, under; *neuron*, nerve.] *Appl.* system of radial and transverse motor nerves in echinoderms.

**hyponome** (hí'pōnōm) *n.* [Gk. *hyponomos*, underground passage.] The funnel of Cephalopoda.

**hyponychium** (hí'pōník'itūm) *n.* [Gk. *hypo*, under; *onyx*, nail.] Layer of epidermis on which nail rests.

**hypopetalous** (hí'pōpēt'ālūs) *a.* [Gk. *hypo*, under; *petalon*, petal.] Having corolla inserted below, and not adherent to, gynoeceum.

**hypophamine**,—see pitocin, pitressin.

**hypophare** (hí'pōfār) *n.* [Gk. *hypo*, under; *pherein*, to bear.] Lower part of sponge, in which there are no chambers; *cf.* spongophare.

**hypopharyngeal** (hí'pöfärín'jéäl) *a.* [Gk. *hypo*, under; *pharyngx*, pharynx.] *Pert.* or situated below or on lower surface of pharynx.

**hypopharynx** (hí'pöfär'ingks) *n.* [Gk. *hypo*, under; *pharyngx*, pharynx.] The lingua of many insects; in mosquitoes, an outgrowth from base of labium which bears the salivary groove or duct.

**hypophloeodal** (hí'pöflē'ödäl) *a.* [Gk. *hypo*, under; *phloios*, bark.] Living or growing under bark.

**hypophyllum** (hí'pöfil'üüm) *n.* [Gk. *hypo*, under; *phyllon*, leaf.] A scale-like leaf below a cladophyll; base of stipulate leaf, forming abscission layer.

**hypophyllous** (hí'pöfil'üs) *a.* [Gk. *hypo*, under; *phyllon*, leaf.] Located or growing under a leaf.

**hypophysectomy** (hí'pöf'sëk'tömi) *n.* [Gk. *hypo*, under; *physis*, growth; *ek*, out; *temnein*, cut.] Excision or removal of the pituitary gland.

**hypophysial** (hí'pöf'iz'äl) *a.* [Gk. *hypo*, under; *physis*, growth.] *Pert.* the hypophysis.

**hypophysin** (hí'pöf'isín) *n.* [Gk. *hypo*, under; *physis*, growth.] Pituitary extract.

**hypophysis** (hí'pöf'isis) *n.* [Gk. *hypo*, under; *physis*, growth.] The pituitary body; also hypophyseos; the olfactory pit in the lancelet; the last cell of the suspensor; the cell from which root-tip arises in dicotyledons.

**hypopituitarism** (hí'pöpitü'itärizm) *n.* [Gk. *hypo*, under; *L. pituita*, phlegm.] Deficiency of pituitary gland, resulting in a type of infantilism; hypohypophysis.

**hypoplasia** (hí'pöplä'siä) *n.* [Gk. *hypo*, under; *plasis*, formation.] Developmental deficiency; hypoplastic development; deficient growth.

**hypoplastron** (hí'pöpläs'trön) *n.* [Gk. *hypo*, under; *F. plastron*, shield.] The third lateral bony plate in plastron of Chelonia.

**hypopleuron** (hí'pöplor'ön) *n.* [Gk.

*hypo*, under; *pleura*, side.] Region below metapleuron in insects.

**hypoploid** (hí'pöplöid) *a.* [Gk. *hypo*, under; *haploos*, onefold; *eidōs*, form.] Aneuploid with fewer chromosomes; lacking one chromosome of the complement. *Opp.* hyperploid.

**hypopodium** (hí'pöpö'diüm) *n.* [Gk. *hypo*, under; *podion*, little foot.] Basal portion of a leaf, including stalk; style of carpel.

**hypoproct** (hí'pöprökt) *n.* [Gk. *hypo*, under; *proktos*, anus.] Medial prolongation of terminal abdominal segment beneath the anus, in Diplopoda and some Insecta.

**hypopteron** (hí'pöp'tērön) *n.* [Gk. *hypo*, under; *pteron*, feather.] Axillary feather in birds.

**hypoptilum** (hí'pöp'tilüm) *n.* [Gk. *hypo*, under; *ptilon*, down.] The aftershaft, *q.v.*

**hypopus** (hí'pöpüs) *n.* [Gk. *hypo*, under; *pous*, foot.] Cyst-like stage of Tyroglyphidae.

**hypopyge** (hí'pöpi'jē) *n.* [Gk. *hypo*, under; *pyge*, rump.] Claspings organ of male dipterous insect; also hypopygium.

**hyporhachis** (hí'pörā'kis) *n.* [Gk. *hypo*, under; *rhachis*, spine.] The stem of aftershaft of a feather, also hyporachis.

**hyposkeletal** (hí'pöskēl'étäl) *a.* [Gk. *hypo*, under; *skeletos*, hard.] Lying beneath or internally to endoskeleton.

**hyposphene** (hí'pösfēn) *n.* [Gk. *hypo*, under; *sphen*, wedge.] A wedge-shaped process on neural arch of vertebra of certain reptiles which fits into hypantrum.

**hypostasis** (hí'pös'täsis) *n.* [Gk. *hypo*, under; *stasis*, standing.] Sediment or deposit, as of blood; recessiveness of non-allelomorphic characters; *cf.* epistasis.

**hypostatic** (hí'pöstät'ik) *a.* [Gk. *hypo*, under; *stasis*, standing.] *Appl.* the recessive of two characters whose genes are not at the same time allelomorphs; exhibiting condition of hypostasis; *cf.* epistatic; *pert.* a sediment.

**hypostereom** (hí'pöstēr'eöm) *n.* [Gk. *hypos*, under; *stereos*, solid.] The third or inner layer of thecal plates, of Cystidea; the inner layer of integument, of Crinoidea.

**hypostoma** (hípös'tömä) *n.* [Gk. *hypos*, under; *stoma*, mouth.] The fold bounding posterior margin of oral aperture in crustaceans; labrum or median preoral plate in trilobites; oral projection or manubrium of a hydrozoan; anteroventral region of insect head; ventral mouth part of ticks; hypostome.

**hypostomatic** (hí'pöstömät'ík) *a.* [Gk. *hypos*, under; *stoma*, mouth.] Situated beneath stomata of plant epidermis; *appl.* chamber or cavity.

**hypostomatous** (hí'pöstöm'ätüs) *a.* [Gk. *hypos*, under; *stoma*, mouth.] Having stomata on under surface; having mouth placed on lower or ventral side.

**hypotarsus** (hí'pötär'süs) *n.* [Gk. *hypos*, under; *L. tarsus*, ankle.] The calcaneum of a bird.

**hypothalamus** (hí'pöthäl'ämüs) *n.* [Gk. *hypos*, under; *thalamos*, chamber.] Region below thalamus, and structures forming greater part of floor of third ventricle.

**hypothallus** (hí'pöthäl'üs) *n.* [Gk. *hypos*, under; *thallos*, young shoot.] The marginal hyphal outgrowth; a membranous case bearing sporangia.

**hypotheca** (hípöthē'kā) *n.* [Gk. *hypos*, under; *theke*, cup.] Theca covering hypocone in Dinoflagellata; younger half of frustule in diatoms.

**hypothecium** (hípöthē'siüm, -shiüm) *n.* [Gk. *hypos*, under; *theke*, cup.] The layer of dense hyphal threads below the thecium in lichens; upper layer of ascoma.

**hypothenar** (hí'pöthēn'är) *a.* [Gk. *hypos*, under; *thenar*, palm of hand.] *Pert.* the prominent part of palm of hand above base of little finger.

**hypothetical units**, — the ultimate component parts of protoplasm;

ultracellular units ranking between the molecule and the cell; also called variously, physiological units, pangens, gemmules, biophores, bioblasts, somacules, idiosomes, plasomes, micellae, plastidules, inotagmata, idioblasts, biogens, gemmae, microzymas, genes, gens, primordia.

**hypotonic** (hí'pötön'ík) *a.* [Gk. *hypos*, under; *tonos*, tension.] Having a lower osmotic pressure than that of another fluid, as of serum.

**hypotrematic** (hí'pötremät'ík) *a.* [Gk. *hypos*, under; *trema*, pore.] *Appl.* the lower lateral bar of branchial basket of lamprey.

**hypotrichous** (hípöt'riküs) *a.* [Gk. *hypos*, under; *thrix*, hair.] Having cilia mainly restricted to under surface; with deficient hair.

**hypotrochanteric** (hí'pötörök'ántēr'ík) *a.* [Gk. *hypos*, under; *trochanter*, runner.] Beneath the trochanter.

**hypotympanic** (hí'pötimpán'ík) *a.* [Gk. *hypos*, under; *L. tympanum*, drum.] Situated below the tympanum; *pert.* quadrate.

**hypotype** (hí'pötíp) *n.* [Gk. *hypos*, under; *typos*, pattern.] Any specimen described or figured in order to amplify or correct the identification of a species; plesiotype, *q.v.*

**hypovalve** (hí'pövälv) *n.* [Gk. *hypos*, under; *L. valva*, fold.] The antapical part of envelope in certain Dinoflagellata; hypocone.

**hypoxanthine** (hí'pözän'thín) *n.* [Gk. *hypos*, under; *xanthos*, yellow.] A crystalline nitrogenous substance found in glandular and muscle tissue and in some seeds;  $C_8H_4ON_4$ .

**hypozygal** (hí'pözi'gäl) *n.* [Gk. *hypos*, under; *zygon*, yoke.] Lower ossicle of a syzygial pair bearing no pinnule.

**hypsodont** (híp'södönt) *a.* [Gk. *hypsos*, height; *odous*, tooth.] *Pert.* or designating teeth with high crowns and short roots; hypselodont.

**hypsohyll** (híp'söfil) *n.* [Gk. *hypsos*, high; *phyllon*, leaf.] Any leaf beneath the sporophylls; bract, bracteole.

**hypural** (hĭpū'rāl) *a.* [Gk. *hypo*, under; *oura*, tail.] *Pert.* a bony structure, formed by fused haemal spines of last few vertebrae, which supports caudal fin in certain fishes.

**hysteranthous** (hĭstērān'thūs) *a.* [Gk. *hysteros*, coming after; *anthos*, flower.] Leafing after appearance of flowers.

**hysterectomy** (hĭs'tērēk'tōmĭ) *n.* [Gk. *hystera*, womb; *ek*, out; *temnein*, cut.] Excision of the uterus.

**hysteresis** (hĭstēr'ēsis) *n.* [Gk. *hysteresis*, late arrival.] Lag in one of two associated processes or phenomena; lag in adjustment of external form to internal stresses, as in chromosome during spiralisation.

**hysterogenic** (hĭs'tērōjēn'ĭk) *a.* [Gk. *hysteros*, later; *genos*, birth.] Of later development or growth.

**hysterosoma** (hĭs'tērōsō'mā) *n.* [Gk. *hysteros*, after; *soma*, body.] Part of body posterior to protosoma and comprising metapodosoma and opisthosoma in Acarina.

**hysterotely** (hĭs'tērōt'ēli) *n.* [Gk. *hysteros*, after; *telos*, completion.] The retention or manifestation of larval characters in pupa or imago, or of pupal characters in imago; metathetely, *opp.* prothetely.

**hyther** (hĭth'ēr) *n.* [Gk. *hy(dor)*, water; *ther(me)*, heat.] Combined effect of moisture and temperature on an organism.

# I

**ichnite** (ĭk'nĭt) *n.* [Gk. *ichnos*, track.] A fossil footprint; ichnolite.

**ichthyic** (ĭk'thĭĭk) *a.* [Gk. *ichthys*, fish.] *Pert.* or characteristic of fishes; ichthyoid.

**ichthyodorulite** (ĭk'thĭdōr'ūlit) *n.* [Gk. *ichthys*, fish; *dory*, spear; *lithos*, stone.] A fossil dermal or fin spine of fish.

**ichthyoid**,—ichthyic.

**ichthyolite** (ĭk'thĭōlit) *n.* [Gk. *ichthys*, fish; *lithos*, stone.] A fossil fish or part of one.

**ichthyology** (ĭk'thĭōl'ōjĭ) *n.* [Gk. *ichthys*, fish; *logos*, discourse.] The study of fishes.

**ichthyopterygia** (ĭk'thĭōptērtj'ĭā) *n. plu.* [Gk. *ichthys*, fish; *pteryx*, wing or fin.] Paired fish fins.

**iconotype** (ĭkō'nōtĭp) *n.* [Gk. *eikon*, image; *typos*, pattern.] Representation, drawing or photograph, of a type.

**icosandrous** (ĭ'kōsān'drūs) *a.* [Gk. *eikosi*, twenty; *aner*, man.] Having twenty or more stamens.

**icotype** (ĭ'kōtĭp) *n.* [Gk. *eikon*, image; *typos*, pattern.] A representative specimen used for identification of a species.

**id** (ĭd) *n.* [Gk. *idios*, distinct.] A hypothetical structural unit; the chromomere.

**idant** (ĭdānt) *n.* [Gk. *idios*, distinct.] A unit resulting from an aggregation of ids; the chromosome.

**identical** (ĭdēnt'ĭkāl) *a.* [L. *idem*, the same.] *Appl.* progeny having the same genes, as monozygotic twins.

**ideoglandular** (ĭdēōglān'dŭlār) *a.* [Gk. *idein*, to see; L. *glandula*, small acorn.] *Pert.* glandular activity induced by a mental image.

**ideomotor** (ĭdēōmō'tōr) *a.* [Gk. *idein*, to see; L. *movere*, to move.] *Pert.* unwilld movement in response to a mental image.

**ideotype** (ĭdēōtĭp) *n.* [Gk. *idein*, to see; *typos*, pattern.] Specimen, other than a topotype, named by the author who has described the species to which it belongs.

**ideovascular** (ĭdēōvās'kulār) *a.* [Gk. *idein*, to see; L. *vasculum*, small vessel.] *Pert.* circulatory changes induced by a mental image.

**idioandrosporous** (ĭd'ĭōāndrōspō'rūs) *a.* [Gk. *idios*, distinct; *aner*, male; *sporos*, seed.] With androspores formed on filaments that do not bear oogonia.

**idiobiology** (Id'ïöbiöl'oji) *n.* [Gk. *idios*, personal; *bios*, life; *logos*, discourse.] Biology of an individual organism; autobiology.

**idioblast** (Id'ïöbläst) *n.* [Gk. *idios*, distinct; *blastos*, bud.] A hypothetical unit, *q.v.*; plant cell containing oil, gum, calcium carbonate, or other product and which differs from the surrounding parenchyma.

**idiocalyptosoma** (Id'ïökälip'trösöm) *n.* [Gk. *idios*, distinct; *kalyptra*, covering; *soma*, body.] Outer zone derived from idiosphaerosome in sperm cells.

**idiochromatin** (Id'ïökrö'mätin) *n.* [Gk. *idios*, distinct; *chroma*, colour.] Temporarily dormant generative chromatin; *cf.* trophochromatin.

**idiochromidia** (Id'ïökrö'mid'ia) *n. plu.* [Gk. *idios*, distinct; *chroma*, colour.] Sporetia; generative chromidia; *cf.* trophochromidia.

**idiochromosome** (Id'ïökrö'mösöm) *n.* [Gk. *idios*, distinct; *chroma*, colour; *soma*, body.] A sex chromosome.

**idiocryptosome** (Id'ïökríp'tösöm) *n.* [Gk. *idios*, distinct; *kryptos*, hidden; *soma*, body.] Inner zone derived from idiosphaerosome in sperm cells.

**idiomuscular** (Id'ïömüs'külär) *a.* [Gk. *idios*, peculiar; L. *musculus*, muscle.] *Appl.* contraction of a degenerated muscle artificially stimulated.

**idiophthartosoma** (Id'ïöfthâr'tösöm) *n.* [Gk. *idios*, distinct; *phthartos*, transitory; *soma*, body.] The idiozome remnant.

**idioplasm** (Id'ïöpläzm) *n.* [Gk. *idios*, distinct; *plasma*, mould.] Chromatin; the generative or germinal part of a cell; *cf.* trophoplasm.

**idiosoma** (Id'ïösö'mä) *n.* [Gk. *idios*, distinct; *soma*, body.] The body, prosoma and opisthosoma of Acarina.

**idiosome** (Id'ïösöm) *n.* [Gk. *idios*, distinct; *soma*, body.] A hypothetical unit, *q.v.*; sphere or region

of cytoplasm differing in viscosity from remainder of cell and surrounding the centriole or centrosome; idiozome, *q.v.*

**idiosphaerosome** (Id'ïösfë'rösöm) *n.* [Gk. *idios*, distinct; *sphaira*, globe; *soma*, body.] Acrosome; central granule of idiosphaerotheca.

**idiosphaerotheca** (Id'ïösfë'röthë'kä) *n.* [Gk. *idios*, distinct; *sphaira*, globe; *theke*, case.] Acroblast; vesicle containing acrosome in sperm cells.

**idiothalamous** (Id'ïöthäl'amüs) *a.* [Gk. *idios*, distinct; *thalamos*, room.] *Appl.* lichens in which various parts are differently coloured from thallus.

**idiothermous** (Id'ïöthër'müs) *a.* [Gk. *idios*, personal; *thermos*, hot.] Warm-blooded; homoiothermal.

**idiotype** (Id'ïötüp) *n.* [Gk. *idios*, personal; *typos*, pattern.] Individual genotype.

**idiovariation**,—mutation, *q.v.*

**idiozome** (Id'ïözöm) *n.* [Gk. *idios*, distinct; *zoma*, girdle.] In spermatogenesis a separated portion of archoplasm which ultimately becomes head-cap of spermatozoon; centrotheca; a cell-body of auxocytes containing the centrioles.

**I-disc**,—singly refracting or isotropic band in myofibrillae.

**idorgan** (Id'örgän) *n.* [Gk. *idios*, distinct; *organon*, instrument.] A purely morphological multicellular unit which does not possess the features of a soma.

**ileocaecal** (Il'ëösë'käl) *a.* [L. *ileum*, groin; *caecus*, blind.] *Pert.* ileum and caecum; *appl.* fossae, folds.

**ileocolic** (Il'ëököl'ik) *a.* [L. *ileum*, groin; Gk. *kolon*, colon.] *Pert.* ileum and colon; *appl.* artery, lymph-glands.

**ileum** (Il'ëüm) *n.* [L. *ileum*, groin.] Lower part of small intestine.

**iliac** (Il'iak) *a.* [L. *ilia*, flanks.] *Pert.* ilium, a pelvic bone; *appl.* artery, fossa, furrow, tuberosity, vein, etc.; *appl.* muscle, iliacus, from upper part of iliac fossa to side of tendon of psoas major; *appl.* processes of



- ischiopubic plate; forming base for pelvic fins.
- iliocaudal** (il'ïökô'däl) *a.* [L. *ilia*, flanks; *cauda*, tail.] Connecting ilium and tail; *appl.* muscle.
- iliococcygeal** (il'ïököksij'éäl) *a.* [L. *ilia*, flanks; Gk. *kokkyx*, cuckoo.] *Pert.* ileum and coccyx; *appl.* a muscle.
- iliocostal** (il'ïökös'täl) *a.* [L. *ilia*, flanks; *costa*, rib.] In region of ilia and ribs; *appl.* several muscles.
- iliofemoral** (il'ïöfëm'öräl) *a.* [L. *ilia*, flanks; *femur*, thigh.] *Pert.* ilium and femur; *appl.* a ligament.
- iliohypogastric** (il'ïöhi'pögäs'trik) *a.* [L. *ilia*, flanks; Gk. *hypo*, under; *gaster*, stomach.] *Pert.* ilium and lower anterior part of abdomen; *appl.* a nerve.
- ilio-inguinal** (il'ïöing'gwïnäl) *a.* [L. *ilia*, flanks; *inguen*, groin.] In the region of ilium and groins; *appl.* a nerve.
- ilio-ischiadic** (il'ïöiskiäd'ik) *a.* [L. *ilia*, flanks; Gk. *ischion*, hip.] *Appl.* fenestra between ilium and ischium when these are fused at both ends.
- iliolumbar** (il'ïölüm'bär) *a.* [L. *ilia*, flanks; *lumbus*, loin.] In region of ilium and loins; *appl.* artery, ligament, vein.
- iliopectineal** (il'ïöpëktin'éäl) *a.* [L. *ilia*, flanks; *pecten*, crest.] *Appl.* an eminence marking point of union of ilium and pubis; *appl.* fascia.
- iliopsoas** (il'ïösö'äs, -psö'äs) *n.* [L. *ilia*, flanks; Gk. *psao*, loins.] Iliacus and psoas major considered as one muscle.
- iliotibial** (il'ïötib'fäl) *a.* [L. *ilia*, flanks; *tibia*, shin.] *Appl.* tract or band of muscle at lower end of thigh.
- iliotrochanteric** (il'ïötrökäntër'ik) *a.* [L. *ilia*, flanks; Gk. *trochanter*, runner.] Uniting ilium and trochanter of femur; *appl.* a ligament.
- ilium** (il'ïüm) *n.* [L. *ilium*, flank.] That part of hip-bone supporting the flank; dorsal bone of pelvic arch.
- illuvial** (ilü'väl) *a.* [L. *in*, into; *luere*, to wash.] *Appl.* lower soil layers or B horizon.
- imaginal** (imäj'inäl) *a.* [L. *imago*, image.] *Pert.* an imago; *appl.* larval discs, patches of cells from which new organs develop.
- imago** (imä'gö) *n.* [L. *imago*, image.] The last or adult stage in insect metamorphosis; the perfect insect.
- imbibition** (im'bibish'un) *n.* [L. *in*, into; *bibere*, to drink.] Absorption of fluids, as of water by roots.
- imbricate** (im'brikät) *a.* [L. *imbricare*, to tile.] Having parts overlying each other like roof-tiles; *appl.* scales, plates, bud-scales, bracts.
- imitative** (im'itätiv) *a.* [L. *imitari*, to imitate.] *Appl.* form, structure, habit, colouring, etc., assumed for protection or aggression.
- immaculate** (imäk'ülät) *a.* [L. *in*, not; *macula*, spot.] Without spots or marks of different colour.
- immune body**,—heat-stable antibody or lysin; amboceptor, *q.v.*
- immunise** (imüniz', im'üniz) *v.* [L. *immunis*, free.] To render invulnerable to a toxin, usually by injecting the toxin in small quantities at short intervals, without appearance of severe symptoms.
- immunity** (imü'niti) *n.* [L. *immunis*, free.] An organism's resistance, natural or acquired, to the onset of pathological conditions from infection, natural or artificial, by micro-organisms or their products.
- impar** (im'pär) *a.* [L. *impar*, unequal.] Not paired; not existing in pairs; azygous.
- imparidigitate** (impär'idij'ität) *a.* [L. *impar*, unequal; *digitus*, finger.] Having an odd number of digits.
- imparipinnate** (impär'ipin'ät) *a.* [L. *impar*, unequal; *pinna*, wing.] Unequally pinnate; pinnate with an odd terminal leaflet.
- imperfect** (impër'fëkt) *a.* [L. *imperfectus*, unfinished.] Incomplete; *appl.* fungi lacking the sexual spore stage.

**imperforate** (impér'fôrât) *a.* [L. *in*, not; *per*, through; *foratus*, bored.] Not pierced; *appl.* foraminiferous shells without fine pores in addition to principal opening.

**impervious** (impér'vîûs) *a.* [L. *in*, not; *pervius*, passable.] Not permeable; *appl.* nostrils with septum between nasal cavities.

**implant** (im'plânt) *n.* [L. *in*, into; *plantare*, to plant.] An organ or part transplanted to an abnormal position; a graft.

**implantation cone**,—cone of origin, *q.v.*

**implex** (im'plêks) *n.* [L. *in*, into; *plicare*, to fold.] Endoplica or infolding of integument for muscle attachment in insects.

**importation** (impôrtâ'shûn) *n.* [L. *importare*, to carry into.] Ingestion by sinking of food into protoplasm of captor, as in certain protozoa.

**impregnation** (im'prêgnâ'shûn) *n.* [L. *impregnare*, to fertilise.] Transference of spermatozoa from male to body of female; insemination.

**impressio** (impres'îô) *n.* [L. *impressio*, impression.] Impression or concavity in one organ or structure where in contact with another, as of surface of liver in contact with stomach, etc.

**impuberal** (impû'bêrâl) *a.* [L. *im-pubes*, under age.] Prepubertal; sexually immature.

**impulse** (im'pûls) *n.* [L. *impulsus*, driven.] Self-propagated disturbance induced by excitation.

**inanthérate** (inân'therât) *a.* [L. *in*, not; Gk. *antheros*, flowering.] Without anthers; anantherous.

**inarticulate** (inârtik'ûlât) *a.* [L. *in*, not; *articulatus*, jointed.] Not segmented; not jointed.

**inaxon** (inâk'sôn) *n.* [Gk. *is*, fibre; *axon*, axis.] A nerve-cell with axis-cylinder branching at a distance from it.

**inbreeding**,—breeding through a succession of parents belonging to the same stock, or very nearly related.

**Inca bones**,—distinct portions of interparietal, found in skulls of former Peruvians; os interparietale.

**incalicate** (inkâlik'ûlât) *a.* [L. *in*, not; *caliculus*, small flower-cup.] Wanting a calice.

**incasement theory**,—preformation theory, *q.v.*

**incisal** (insî'sâl) *a.* [L. *incidere*, to cut into.] Cutting, as edge of a tooth.

**incised** (insîzd') *a.* [L. *incisus*, cut into.] With deeply notched margin.

**incisiform** (insî'zîfôrm) *a.* [L. *incisus*, cut into; *forma*, shape.] Incisor-shaped.

**incisive** (insî'siv) *a.* [L. *ncisus*, cut into.] *Pert.* or in region of incisors; *appl.* bones, foramina, fossa.

**incisor** (insî'sôr) *a.* [L. *incisus*, cut into.] Adapted for cutting—*appl.* mammalian premaxillary teeth. *n.* A crest or ridge of palatine process of maxilla.

**incisura** (insîsû'râ) *n.* [L. *incidere*, to cut into.] Notch, depression, or indentation, as in bone, stomach, liver, etc.

**included** (inklood'êd) *a.* [L. *incluere*, to shut in.] Having stamens and pistils not protruding beyond corolla; not exserted.

**inclusion bodies**,—intracellular particles, as pigment granules, mitochondria, Golgi bodies, microsomes, viruses, etc.

**incomplete metamorphosis**,—insect metamorphosis in which young are hatched in general adult form and develop without quiescent stage.

**incongruent** (inkông'grooënt) *a.* [L. *incongruens*, not suiting.] Not suitable or fitting; *appl.* surface of joints which do not fit properly.

**incoordination** (in'kôôr'dinâ'shûn) *n.* [L. *in*, not; *cum*, together; *ordo*, order.] Want of co-ordination; irregularity of movement due to loss of muscle control.

**incrassate** (inkrâs'ât) *a.* [L. *incrassare*, to thicken.] Thickened; becoming thicker.

**incretion** (Inkrê'shûn) *n.* [L. *in*,

into; *cretus*, separated.] Internal secretion.

**incrustation** (inkrŭstā'shŭn) *n.* [L. *in*, into; *crusta*, shell.] Fossilisation by encasement in mineral substance.

**incubation** (in'kŭbā'shŭn) *n.* [L. *incubare*, to lie on.] The hatching of eggs by means of heat, natural or artificial; period between infection and appearance of symptoms induced by parasitic organisms.

**incubatorium** (in'kŭbātō'riŭm) *n.* [L. *incubare*, to lie on.] Temporary pouch surrounding mammary area, in which egg of *Echidna* is hatched.

**incubous** (in'kŭbŭs) *a.* [L. *incubare*, to lie on.] *Appl.* leaves so arranged that the base of each is covered by upper portion of next lower.

**incudal** (in'kŭdāl) *a.* [L. *incus*, anvil.] *Pert.* the *incus*; *appl.* fold, fossa.

**incudate** (in'kŭdāt) *a.* [L. *incus*, anvil.] *Appl.* type of rotifer mastax with large and hooked rami and reduced mallei.

**incumbent** (inkŭm'bēnt) *a.* [L. *incumbere*, to lie upon.] Lying upon; bent downwards to lie along a base; *appl.* cotyledons so folded that flat sides are next radicle; *appl.* hairs or spines applied lengthwise to their base; *appl.* insect wings resting on abdomen.

**incurrent** (inkŭr'ēnt) *a.* [L. *in*, into; *currere*, to run.] Leading into; afferent; *appl.* ectoderm-lined canals which admit water, in sponges; *appl.* inhalant siphons of molluscs.

**incurvate** (inkŭr'vāt) *a.* [L. *incurvus*, bent.] Curved inwards or bent back.

**incurvation** (in'kŭrvā'shŭn) *n.* [L. *incurvare*, to curve.] The doubling back on itself of a structure or organ, as of a spirochaete about to divide.

**incus** (in'kŭs) *n.* [L. *incus*, anvil.] Part of a rotifer mastax; the anvil-shaped ear ossicle of mammals.

**indeciduate** (in'dēsīd'ŭāt) *a.* [L. *in*,

not; *decidere*, to fall down.] Non-caducous; with maternal part of placenta not coming away at birth.

**indeciduous** (in'dēsīd'ŭūs) *a.* [L. *in*, not; *decidere*, to fall down.] Persistent; not falling off at maturity; everlasting; evergreen.

**indefinite** (indēf'init) *a.* [L. *in*, not; *definitus*, limited.] Not limited; not determinate; of no fixed number; racemose, *q.v.*

**indehiscent** (in'dēhīs'ēnt) *a.* [L. *in*, not; *dehiscens*, gaping.] Not splitting at maturity; *appl.* certain fruits.

**indeterminate growth**,—growth of stem, branch or shoot not limited or stopped by development of a terminal bud; indefinite prolongation and subdivision of an axis.

**indeterminate inflorescence**,—growth of a floral axis by indefinite branching because unlimited by development of a terminal bud.

**index**,—the forefinger or digit next to the thumb; a number or formula expressing ratio of one quantity to another.

**indicators**,—species characteristic of climatic, soil and other conditions in a particular region or habitat; dominant species in a biotope.

**indigenous** (Indij'enŭs) *a.* [L. *indigena*, native.] Belonging to the locality; not imported; native.

**individual** (in'divid'ŭāl) *a.* [L. *in*, not; *dividuus*, divisible.] *Pert.* a single example or unit, as individual variations of colour. *n.* A person or zooid of distinctive function of a hydrozoan colony.

**individualism**,—symbiosis in which the two parties together form what appears to be a single organism.

**individuation**,—development of interdependent functional units, as in colony formation; organisation of morphogenetic processes; regional or tissue differentiation; process of developing into an individual.

**indole-acetic acid**,—see heteroauxin.

**induced movement**,—movement dictated and influenced by external stimulus, as plant curvature.

**induction** (indūk'shūn) *n.* [L. *inducere*, to lead in.] Act or process of causing to occur; process whereby a cell or tissue influences neighbouring cells or tissues; lowering by one reflex of the threshold of another, spinal induction.

**inductive stimulus**,—an external stimulus which influences growth or behaviour of an organism.

**indumentum** (In'dūmēn'tūm) *n.* [L. *indumentum*, covering.] The plumage of birds; a hairy covering.

**induplicate** (indū'plikāt) *a.* [L. *in*, in; *duplex*, double.] In veneration having bud-leaves bent or rolled without overlapping; in aestivation having bud sepals or petals folded inwards at points of contact.

**induplicative** (indū'plikātiv) *a.* [L. *in*, in; *duplex*, double.] *Appl.* veneration or aestivation with induplicate foliage or floral leaves respectively.

**indusial** (indū'ziāl) *a.* [L. *induere*, to put on.] Containing larval insect cases, as certain limestones; *pert.* the indusium.

**indusiate** (indū'ziāt) *a.* [L. *induere*, to put on.] Having an enveloping case, *appl.* insect larvae; having an indusium.

**indusiform** (indū'zifōrm) *a.* [L. *induere*, to put on; *forma*, shape.] Resembling an indusium.

**indusium** (indū'ziūm) *n.* [L. *induere*, to put on.] An outgrowth of plant epiderm covering and protecting a sorus; an insect larva case; the supracallosal gyrus of the rhinencephalon, indusium griseum.

**induviae** (indū'viē) *n. plu.* [L. *induere*, to put on.] Scale-leaves; leaves which remain attached to stem after withering.

**induviate** (indū'viāt) *a.* [L. *induere*, to put on.] Covered with scale-leaves or induviae.

**inequilateral** (inēk'wīlāt'ērāl) *a.* [L. *in*, not; *aequus*, equal; *latus*, side.] Having two sides unequal; having unequal portions on either side of a line drawn from umbo to gape of a bivalve shell.

**inequilobate** (inēk'wīlō'bāt) *a.* [L. *in*, not; *aequus*, equal; *lobus*, lobe.] With lobes of unequal size.

**inequivalve** (inēk'wivālv) *a.* [L. *in*, not; *aequus*, equal; *valvae*, folding doors.] Having two valves of shell unequal; *appl.* molluscs.

**inerm** (inērm') *a.* [L. *inermis*, unarmed.] Without means of defence and offence; without spines; inermous.

**inert** (inērt') *a.* [L. *iners*, inactive.] Physiologically inactive; *appl.* heterochromatic region of chromosome with paucity of active genes.

**inferior** (infē'riōr) *a.* [L. *inferior*, lower.] *Appl.* lower placed of two, farther down axis; growing or arising below another organ.

**inferoanterior** (in'ferōāntē'riōr) *a.* [L. *inferus*, beneath; *anterior*, in front.] Below and in front.

**inferobranchiate** (in'fērōbrāng'kiāt) *a.* [L. *inferus*, beneath; Gk. *branchia*, gills.] With gills under margin of mantle, as in certain molluscs.

**inferolateral** (in'fērōlāt'ērāl) *a.* [L. *inferus*, beneath; *latus*, side.] Below and at or towards the side.

**inferomedian** (in'fērōmē'diān) *a.* [L. *inferus*, beneath; *medius*, middle.] Below and about the middle.

**inferoposterior** (in'fērōpōstē'riōr) *a.* [L. *inferus*, beneath; *posterior*, behind.] Below and behind.

**inferradial** (in'fērā'diāl) *n.* [L. *inferus*, beneath; *radius*, radius.] Lower part of transversely bisected radials of certain fossil crinoids.

**inflected** (inflēk'tēd) *a.* [L. *inflectere*, to bend in.] Curved or abruptly bent inwards or towards the axis; inflexed.

**inflorescence** (in'flōrēs'ēns) *n.* [L. *inflorescere*, to begin to blossom.] A flowering or putting forth blossoms; method in which flowers are arranged on an axis.

**influent** (in'flooēnts) *n. plu.* [L. *influerē*, to flow into.] The animals present in a plant community, or those primarily dependent and acting upon the dominant plant species.

**infra-axillary** (in'frāāk'silāri) *a.* [L.

- infra*, below; *axilla*, armpit.] Branching off below the axil.
- infrabasal** (in'frābāsāl) *n*. [L. *infra*, below; *basis*, base.] One of a series of plates, perradial in position, below the basals in crinoids.
- infrabranchial** (in'frābrāŋ'kiāl) *a*. [L. *infra*, below; *branchiae*, gills.] Below the gills; *appl.* part of pallial chamber.
- infracentral** (in'frāsēn'trāl) *a*. [L. *infra*, below; *centrum*, centre.] Below a vertebral centrum.
- infraclavicle** (in'frāklāv'ikēl) *n*. [L. *infra*, below; *clavicula*, little key.] Membrane bone occurring in pectoral girdle of some fishes.
- infraclavicular** (in'frāklāv'ik'ulār) *a*. [L. *infra*, below; *clavicula*, small key.] Beneath the clavicle; *appl.* branches of brachial plexus; *appl.* fossa or triangle between deltoid and pectoralis major.
- infracortical** (in'frākōr'tikāl) *a*. [L. *infra*, below; *cortex*, bark.] Beneath the cortex.
- infracostal** (in'frākōs'tāl) *a*. [L. *infra*, below; *costa*, rib.] Beneath the ribs; *appl.* muscles.
- infradentary** (in'frādēn'tārī) *a*. [L. *infra*, below; *dens*, tooth.] Beneath the dentary bone.
- infraglenoid** (in'frāglē'noid) *a*. [L. *infra*, below; Gk. *glene*, socket; *eidos*, like.] Below glenoid cavity; *appl.* a tuberosity.
- infrahyoid** (in'frāhi'oid) *a*. [L. *infra*, below; Gk. *hyooides*, Y-shaped.] Beneath the hyoid; *appl.* muscles.
- infralabial** (in'frālā'biāl) *a*. [L. *infra*, below; *labium*, lip.] Beneath the lower lip.
- inframarginal** (in'frāmār'jināl) *a*. [L. *infra*, below; *margo*, margin.] Under the margin, or marginal structure; *appl.* a cerebral convolution; *appl.* certain plates on carapace of Chelonia below marginals; *appl.* lower of two series of plates round margin of stelleroid arms and discs.
- inframaxillary** (in'frāmāksil'ārī) *a*. [L. *infra*, below; *maxilla*, jaw.] Beneath maxilla; *appl.* nerves.
- infranasal** (in'frānāsāl) *n*. [L. *infra*, below; *nasus*, nose.] An additional nasal element in some Thero-morpha.
- infraorbital** (in'frāôr'bitāl) *a*. [L. *infra*, below; *orbis*, circle.] Beneath the orbit; *appl.* artery, canal, foramen, groove, nerve, glands, etc.
- infrapatellar** (in'frāpātēl'ār) *a*. [L. *infra*, below; *patella*, knee-cap.] *Appl.* pad of fat beneath patella.
- infrarostral** (in'frārōs'trāl) *a*. [L. *infra*, below; *rostrum*, snout.] Beneath a rostrum; *appl.* paired cartilages, derived from Meckel's cartilage, of lower part of suctorial mouth of tadpoles.
- infrascapular** (in'frāskāp'ulār) *a*. [L. *infra*, below; *scapula*, shoulder-blade.] Beneath the scapula; *appl.* artery.
- infraspacific** (in'frāspēsif'ik) *a*. [L. *infra*, below; *species*, particular kind.] *Pert.* a subdivision of a species, as subspecies and varieties.
- infraspinauous** (in'frāspīnā'tūs) *a*. [L. *infra*, below; *spina*, spine.] Beneath the spine; beneath scapular spine; *appl.* muscle, fossa; infraspinauous.
- infrastapedial** (in'frāstāpē'diāl) *a*. [L. *infra*, below; *stapes*, stirrup.] Beneath stapes of ear; *appl.* part of columella.
- infrasternal** (in'frāstēr'nāl) *a*. [L. *infra*, below; *sternum*, breast-bone.] Below the breast-bone; *appl.* notch superficially at lower end of sternum.
- infratemporal** (in'frātēm'pōrāl) *a*. [L. *infra*, below; *tempora*, temples.] Beneath the temporal bone; *appl.* a crest and fossa.
- infratrochlear** (in'frātrōk'lēār) *a*. [L. *infra*, below; *trochlea*, pulley.] Beneath the trochlea; *appl.* a nerve given off from nasociliary nerve.
- infructescence** (in'frūktēs'ēns) *n*. [L. *in*, into; *fructus*, fruit.] An inflorescence matured into a fruit; a composite or confluent fruit.

**infundibular** (in'fündib'ülär) *a.* [L. *infundibulum*, funnel.] Funnel-shaped; *appl.* an abdominal muscle; *appl.* corolla; *infundibuliform*; choanoid, *q.v.*; *pert.* *infundibulum*.

**infundibulin** (infündib'ülln) *n.* [L. *infundibulum*, funnel.] An extract of posterior pituitary lobe causing decrease in renal water excretion; antidiuretin; *infundin*.

**infundibulum** (in'fündib'ülüm) *n.* [L. *infundibulum*, funnel.] Any funnel-shaped organ or structure; *appl.* part of brain, of ethmoid bone, of right ventricle, etc.; a cephalopod siphon; part of bird's oviduct; flattened stomach-like cavity of ctenophore; septal funnel in Scyphozoa.

**infusate** (infüs'kät) *a.* [L. *in*, into; *fuscus*, dark.] Tinged to appear dark, as insect wings.

**infusoriform** (in'fūsō'rifōrm) *a.* [L. *infusus*, poured into; *forma*, shape.] Resembling an infusorian; *appl.* embryonic forms of Coelentera; *appl.* male form of Dicyemidae.

**infusorigen** (in'fūsō'rijēn) *n.* [L. *infusus*, poured into; *genos*, offspring.] A gastrula-like phase in development of certain Mesozoa.

**ingest** (injēst') *v.* [L. *ingestus*, taken in.] To convey food material into the alimentary canal or food-cavity.

**ingesta** (injēs'tā) *n. plu.* [L. *ingestus*, taken in.] The sum-total of substances taken in by the body. *Opp.* *egesta*.

**ingestion** (injēs'tiōn) *n.* [L. *ingestus*, taken in.] The swallowing or taking in of food-material.

**ingluvies** (ingloov'īēz) *n.* [L. *ingluvies*, crop.] The crop of a bird; a dilatation of oesophagus; the rumen.

**inguinal** (ing'gwīnāl) *a.* [L. *inguen*, groin.] In region of groin.

**inguinal ring**,—see abdominal ring.

**inguino-abdominal**,—in region of abdomen and groin.

**inguino-crural**,—in region of groin and leg.

**inhalant** (inhā'lānt) *a.* [L. *in*, into; *halare*, to breathe.] Adapted for

inspiring or drawing in, as terminal pores of incurrent canals in sponges, or siphons in molluscs.

**inhibition** (in'hībīsh'ōn) *n.* [L. *inhibere*, to prohibit.] Prohibition, or checking, of an action or process.

**inhibitory** (inhīb'itōri) *a.* [L. *inhibere*, to prohibit.] *Appl.* nerves which control movement or secretion.

**inion** (in'īōn) *n.* [Gk. *inion*, back of head.] The external protuberance of occipital bone.

**initial** (inīsh'āl) *n.* [L. *initium*, beginning.] A cell which initiates differentiation of tissues, as in apical meristem, vascular cambium, etc.; histogen cell, primordial cell.

**ink sac**,—in Sepia, a pear-shaped body in wall of mantle cavity which contains the ink gland, secreting a black substance, ink or sepia, ejection of which is a means of defence.

**innate** (in'nāt) *a.* [L. *in*, in; *gnatus*, born.] Inherited; basifixed, *appl.* anther with filament attached only to base.

**innervation** (in'nervā'shūn) *n.* [L. *in*, into; *nervus*, sinew.] Nerve-distribution; vital nerve force.

**innidiation** (in'nidīā'shūn) *n.* [L. *in*, into; *nidus*, nest.] Colonisation or development of cells or organisms in a part of the body to which they have been transferred by metastasis, *q.v.*

**innominate** (innōm'īnāt) *a.* [L. *in*, not; *nomen*, name.] Nameless; *appl.* various arteries and veins.

**innominate bone**,—the hip-bone or lateral half of pelvic girdle; os coxae, os innominatum.

**innovation** (in'ōvā'shūn) *n.* [L. *innovare*, to renew.] A growth or shoot of mosses which develops into a new plant by dying-off of portion of parent-plant behind it; basal vegetative shoot of grasses.

**inocomma** (īn'ōkōm'ā) *n.* [Gk. *is*, fibre; *komma*, clause.] Portion of muscle fibril between telophragmata or Z discs; inokomma; sarcomere.

**inocular** (inök'ülär) *a.* [L. *in*, into; *oculus*, eye.] *Appl.* antennae inserted close to eye.

**inocyte** (in'ösit) *n.* [Gk. *is*, fibre; *kytos*, hollow.] Elongated cell of fibrous tissue.

**inogen** (in'öjēn) *n.* [Gk. *is*, fibre; *genos*, offspring.] A nitrogenous substance of muscle tissue.

**inophragma** (in'öfräg'mä) *n.* [Gk. *is*, fibre; *phragma*, fence.] The transverse membrane through adjacent myofibrillae; mesophragma and telophragma; M and Z lines bisecting A- and I-discs.

**inositol**,—carbohydrate present in cells, the lipotropic anti-alopecia factor of bios, *q.v.*;  $C_6H_{12}O_6$ .

**inotagmata** (in'ötäg'mätä) *n. plu.* [Gk. *is*, fibre; *tagma*, arrangement.] Hypothetical units, *q.v.*

**inquiline** (in'kwilīn) *n.* [L. *inquilinus*, tenant.] Animal living in home of another and getting share of its food; partner in commensalism; an insect developing in gall produced by an insect of another species, being detrimental to the latter.

**inscriptions, tendinous**,—three fibrous bands crossing the rectus abdominis muscle.

**insectivorous** (in'sektiv'örūs) *a.* [L. *insectum*, cut into; *vorare*, to devour.] Insect-eating; *appl.* certain animals and carnivorous plants.

**insemination** (in'sēminā'shūn) *n.* [L. *in*, in; *seminatio*, sowing.] The introduction of semen or spermatozoa into female genital tract.

**inserted** (insēr'tēd) *a.* [L. *in*, in; *serere*, to join.] United by natural growth.

**insertion** (insēr'shūn) *n.* [L. *insertus*, joined.] Point of attachment of organs, as of muscles, leaves; point on which force of a muscle is applied.

**insertional**,—*appl.* translocation in which the portion between two breaks of a chromosome is transferred to a break in another chromosome; *cf.* shift.

**insessorial** (in'sēsō'riäl) *a.* [L. *in-*

*sidere*, to sit upon.] Adapted for perching.

**insistent** (insīs'tēnt) *a.* [L. *insistere*, to stand upon.] *Appl.* hind toe of certain birds whose tip only reaches the ground.

**insolation** (insölā'shūn) *n.* [L. *in*, into; *sol*, sun.] Exposure to sun's rays.

**inspiration** (inspirā'shūn) *n.* [L. *inspirare*, to inhale.] The act of drawing air into the lungs; absorption of oxygen by plants.

**instaminate** (instām'ināt) *a.* [L. *in*, not; *stamen*, thread.] Not bearing stamens.

**instar** (in'stär) *n.* [L. *instar*, form.] Insect at a particular stage between moults.

**insula** (in'sülä) *n.* [L. *insula*, island.] Island of Reil, a triangular eminence lying deeply in lateral fissure of temporal lobe; islet of Langerhans, *q.v.*; a blood island, *q.v.*

**insulin** (in'sülīn) *n.* [L. *insula*, island.] The anti-diabetic endocrine product of pancreas, formed in  $\beta$ -cells of islets of Langerhans;  $C_{45}H_{89}O_{14}N_{11}S \cdot 3H_2O$ .

**integrifolious** (intēg'rifō'lūs) *a.* [L. *integer*, whole; *folium*, leaf.] With entire leaves.

**integripallial** (intēg'ripāl'iäl), **integripalliate** (intēg'ripāl'iāt) *a.* [L. *integer*, whole; *pallium*, mantle.]

Having an unbroken pallial line; *appl.* shells of molluscs with small or no siphons.

**integument** (intēg'ümēnt) *n.* [L. *integumentum*, covering.] A covering, investing, or coating structure or layer; coat of ovule; integumentum.

**interacinous** (in'tēräs'inūs) *a.* [L. *inter*, between; *acinus*, grape.] Among alveoli of a racemose gland; interacinar.

**interalveolar** (in'tēräl'vēölär) *a.* [L. *inter*, among; *alveolus*, small cavity.] Among alveoli; *appl.* cell islets.

**interamb** (intērāmb') *n.* [L. *inter*, between; *ambulare*, to walk.] Interambulacral area.

**interambulacral** (in'tērāmbulā'krāl) *a.* [L. *inter*, between; *ambulare*, to walk.] *Appl.* area of echinoderm test between two ambulacral areas. *n.* A plate of that area.

**interambulacrum** (in'tērāmbulā'krūm) *n.* [L. *inter*, between; *ambulare*, to walk.] The area between two ambulacral areas.

**interarticular** (in'tērārtik'ulār) *a.* [L. *inter*, between; *articulus*, joint.] Between articulating parts of bones; *appl.* certain ligaments and fibrocartilages.

**interatrial** (in'tērā'triāl) *a.* [L. *inter*, between; *atrium*, hall.] *Appl.* groove separating the two atria of the heart.

**interauricular** (in'tērōrik'ulār) *a.* [L. *inter*, between; *auricula*, little ear.] Between auricles of heart.

**interaxillary** (in'tērāk'silārī) *a.* [L. *inter*, between; *axilla*, armpit.] Placed between the axils.

**interbrachial** (in'tērbrā'kiāl) *a.* [L. *inter*, between; *brachium*, arm.] Between arms, rays, or brachial plates.

**interbranchial** (in'tērbrāng'kiāl) *a.* [L. *inter*, between; *branchiae*, gills.] *Appl.* septum between successive gill slits.

**interbreed** (in'tērbrēd') *v.* [L. *inter*, between; A.S. *brod*, brood.] To cross different varieties of plants or animals.

**intercalare** (in'tērkal'ārē) *n.* [L. *intercalaris*, inserted.] In many fishes and fossil amphibians, an additional element in the vertebra.

**intercalarium** (in'tērkalārīūm) *n.* [L. *intercalaris*, inserted.] The third Weberian ossicle.

**intercalary** (in'tērkal'ārī, in'tēr'kalārī) *a.* [L. *intercalaris*, inserted.] Inserted; additional; *appl.* meristematic layers between masses of permanent tissue; *appl.* growth elsewhere than at growing point; *appl.* veins between main veins of insect wings; *appl.* plates in Dinoflagellata; *appl.* bands in diatoms; *appl.* cartilage between neural arches, interneural or interdorsal plate.

**intercapitular** (in'tērkapīt'ulār) *a.* [L. *inter*, between; *capitulum*, little head.] Between capitula; *appl.* veins of fingers and toes.

**intercarotid** (in'tērkarōt'id) *a.* [L. *inter*, between; Gk. *karos*, deep sleep.] Between carotid arteries.

**intercarpal** (in'tērkar'pāl) *a.* [L. *inter*, between; *carpus*, wrist.] Among or between carpal bones; *appl.* joints.

**intercarpellary** (in'tērkar'pēlārī) *a.* [L. *inter*, between; Gk. *karpos*, fruit.] Between the carpels.

**intercartilaginous** (in'tērkartilāj'inūs) *a.* [L. *inter*, between; *cartilago*, gristle.] Between cartilages.

**intercavernous** (in'tērkvā'ernūs) *a.* [L. *inter*, between; *caverna*, cavern.] *Appl.* sinuses connecting cavernous sinuses, part of ophthalmic veins.

**intercellular** (in'tērsēl'ulār) *a.* [L. *inter*, between; *cellula*, little cell.] Among or between cells, as spaces in meristem, biliary passages among liver-cells, plexus of dendrites between sympathetic ganglion cells, etc.

**intercentral** (in'tērsēn'trāl) *a.* [L. *inter*, between; *centrum*, centre.] Uniting, or between, two centra.

**intercentrum** (in'tērsēn'trūm) *n.* [L. *inter*, between; *centrum*, centre.] A second central ring in an embolomorous vertebra.

**interchange**,—mutual or reciprocal translocation, in chromosomes.

**interchondral** (in'tērkhōn'drāl) *a.* [L. *inter*, between; Gk. *chondros*, cartilage.] *Appl.* articulations and ligaments between costal cartilages.

**intercingular** (in'tērsing'gūlār) *a.* [L. *inter*, between; *cingulum*, girdle.] *Appl.* area of longitudinal groove between parts of a spiral girdle, in certain Dinoflagellata.

**interclavicle** (in'tērklāv'īkl) *n.* [L. *inter*, between; *clavicula*, small key.] The episternum; a median ventral bone between clavicles.

**interclavicular** (in'tērklāvīk'ulār) *a.* [L. *inter*, between; *clavicula*, small key.] Between the clavicles; *appl.* a ligament.



**interclinoid** (in'tērklī'noid) *a.* [L. *inter*, between; Gk. *kline*, bed; *eidos*, form.] Joining clinoid processes; *appl.* fibrous process or ligament.

**intercolumnar** (in'tērkolūm'nār) *a.* [L. *inter*, between; *columna*, column.] Between columnar structures, as certain abdominal muscle fibres.

**intercondyloid** (in'tērkon'diloid) *a.* [L. *inter*, between; Gk. *kondylos*, knob; *eidos*, form.] Between condyles; *appl.* an eminence of tibia, and fossae of femur and tibia.

**intercostal** (in'tērkos'tāl) *a.* [L. *inter*, between; *costa*, rib.] Between the ribs, as arteries, glands, membranes, nerves, veins, muscles; between ribs of leaf, mericarp, etc.

**intercostobrachial** (in'tērkos'tōbrā'kiāl) *a.* [L. *inter*, between; *costa*, rib; *brachium*, arm.] *Appl.* lateral branch of second intercostal nerve which supplies upper arm; intercostohumeral.

**intercoxal** (in'tērkok'sāl) *a.* [L. *inter*, between; *coxa*, hip.] Between the coxae or proximal limb-joints of arthropods; *appl.* plate, etc.

**intercrescence** (in'tērkrēs'ens) *n.* [L. *inter*, between; *crescere*, to grow.] A growing into each other, as of tissues.

**intercrural** (in'tērkrōo'rāl) *a.* [L. *inter*, between; *crus*, leg.] *Appl.* intercolumnar tendinous fibres arching across external oblique muscles.

**intercuneiform** (in'tērkunē'ifōrm) *a.* [L. *inter*, between; *cuneus*, wedge; *forma*, shape.] Connecting the three cuneiform bones of the ankle; *appl.* articulations and ligaments.

**interdeferential** (in'tērdēfērēn'shāl) *a.* [L. *inter*, between; *deferre*, to carry down.] Between the vasa deferentia.

**interfascicular** (in'tērfāsik'ulār) *a.* [L. *inter*, between; *fasciculus*, small bundle.] Situated between the fascicles or vascular bundles; *appl.* cambium.

**interfemoral** (in'tērfēm'ōrāl) *a.* [L. *inter*, between; *femur*, thigh bone.] Between the thighs.

**interference** (in'tērfēr'ēns) *n.* [L. *inter*, between; *ferire*, to strike.] The lessened probability of crossing-over in the neighbourhood of a previous crossing-over.

**interfertile** (in'tērfēr'tīl) *a.* [L. *inter*, between; *fertilis*, fertile.] Able to interbreed.

**interfilamentar** (in'tērfilāmēn'tār) *a.* [L. *inter*, between; F. *filament*, from L. *filum*, thread.] *Appl.* junctions or horizontal bars connecting molluscan gill filaments.

**interfilar** (in'tērfīlār) *a.* [L. *inter*, between; *filum*, thread.] *Appl.* ground-substance of protoplasm, as opposed to reticulum.

**interfoliaceous** (in'tērfōllā'shūs) *a.* [L. *inter*, between; *folium*, leaf.] Situated or arising between two opposite leaves; interfoliar.

**interfrontal** (in'tērfryn'tāl) *n.* [L. *inter*, between; *frons*, forehead.] An unpaired median bone between frontals and nasals in Eryops.

**interganglionic** (in'tērgāngglīōn'īk) *a.* [L. *inter*, between; Gk. *ganglion*, little tumour.] Connecting two ganglia, as nerve cords or strands.

**intergeneric** (in'tērjēnēr'īk) *a.* [L. *inter*, between; *genus*, kind.] Between genera; *appl.* hybridisation.

**intergenital** (in'tērjēn'itāl) *a.* [L. *inter*, between; *genitus*, produced.] Between the genitals; *appl.* certain echinoderm plates.

**interglacial** (in'tērglā'stāl) *a.* [L. *inter*, between; *glacies*, ice.] *Appl.* or *pert.* ages between glacial ages, particularly of the Pleistocene epoch.

**interglobular** (intērglōb'ulār) *a.* [L. *inter*, between; *globulus*, small globe.] *Appl.* a series of spaces towards outer surface of dentine, due to imperfect calcification.

**intergular** (in'tērgū'lār) *n.* [L. *inter*, between; *gula*, gullet.] A paired or unpaired plate in front of gulars in Chelonia.

**interhyal** (in'tērhi'āl) *n.* [L. *inter*, between; Gk. *hyooides*, T-shaped.] A small bone between hyomandibular and rest of hyoid of some higher vertebrates.

**interkinesis** (in'tērkinē'sis) *n.* [L. *inter*, between; Gk. *kinesis*, movement.] Interphase; resting stage between two mitotic divisions of a cell.

**interlamellar** (in'tērlāmēl'ār) *a.* [L. *inter*, between; *lamella*, thin plate.] *Appl.* vertical bars of tissue joining gill lamellae of molluscs; *appl.* spaces between lamellae or gills of agarics.

**interlaminar** (in'tērlām'inār) *a.* [L. *inter*, between; *lamina*, thin plate.] Uniting laminae; between laminae.

**interlobar** (in'tērlō'bār) *a.* [L. *inter*, between; L.L. *lobus*, lobe.] Between lobes; *appl.* sulci and fissures dividing cerebral hemispheres into lobes.

**interlobular** (in'tērlōb'ulār) *a.* [L. *inter*, between; *lobulus*, small lobe.] Occurring between lobules; *appl.* kidney arteries, vessels of liver, etc.

**interlocular** (in'tērlōk'ulār) *a.* [L. *inter*, between; *loculus*, compartment.] Between loculi.

**interloculus** (in'tērlōk'ulūs) *n.* [L. *inter*, between; *loculus*, compartment.] Space between two loculi.

**intermandibular** (in'tērmāndib'ulār) *a.* [L. *inter*, between; *mandibulum*, jaw.] Between rami of mandibles.

**intermaxilla** (in'tērmāksil'ā) *n.* [L. *inter*, between; *maxilla*, jaw.] Bone between maxillae; the premaxilla.

**intermaxillary** (in'tērmāksil'ārī) *a.* [L. *inter*, between; *maxilla*, jaw.] Between maxillae; *pert.* premaxillae; *appl.* gland in nasal septum of certain amphibians and reptiles.

**intermediary** (in'tērmē'diārī) *a.* [L. *inter*, between; *medius*, middle.] Acting as a medium; *appl.* nerve-cells receiving impulses from afferent cells and transmitting them to efferent cells.

**intermediate** (in'tērmē'diāt) *a.* [L. *inter*, between; *medius*, middle.] Occurring between two points or parts; *appl.* a nerve-mass, certain areas of brain, a disc in striated muscle, ribs, etc.

**intermediate host**,—host intervening between two others in life-history of certain parasites, as *Limnaea* in life-history of *Fasciola*.

**intermedin** (in'tērmē'din) *n.* [L. *inter*, between; *medius*, middle.] Hormone obtained from pars intermedia of the pituitary gland; B substance.

**intermedium** (in'tērmē'diūm) *n.* [L. *inter*, between; *medius*, middle.] A small bone of carpus and tarsus.

**intemesenteric** (in'tērmēs'entēr'ik, -mēz-) *a.* [L. *inter*, between; Gk. *mesos*, middle; *enteron*, gut.] Occurring between mesenteries; *appl.* spaces in sea-anemones.

**intermitotic** (in'tērmītōt'ik) *n.* [L. *inter*, between; Gk. *mitos*, thread.] A cell with individual life between mitoses causing its origin and division into daughter cells; *cf.* postmitotic.

**intermuscular** (in'tērmūs'kulār) *a.* [L. *inter*, between; *musculus*, muscle.] Between or among muscle fibres.

**intermyotomic** (in'tērmī'ōtōm'ik) *a.* [L. *inter*, between; Gk. *mys*, muscle; *tome*, cutting.] *Appl.* vertebra formed of caudals of one somite and cranials of next posterior; *cf.* intrasegmental.

**internal** (intēr'nāl) *a.* [L. *internus*, within.] Located on inner side; nearer middle axis; located or produced within.

**internal secretion**,—endocrine secretion; hormone.

**internal spiral**,—coil within a single chromatid, as between prophase and anaphase.

**internasal** (in'tērnā'zāl) *a.* [L. *inter*, between; *nasus*, nose.] Between nostrils; *appl.* plate, septum, gland.

**interneural** (in'ternū'rāl) *a.* [L. *inter*, between; Gk. *neuron*, nerve.] Between neural processes, arches or spines; *appl.* sharp bones attached to dorsal fin rays; *appl.* intercalary cartilages.

**interneurone** (in'ternū'rōn) *n.* [L. *inter*, between; Gk. *neuron*, nerve.] An internuncial neurone or relay cell.

**internodal** (in'ternō'dāl) *a.* [L. *inter*, between; *nodus*, knot.] *Pert.* part between two nodes.

**internode** (in'ternōd) *n.* [L. *inter*, between; *nodus*, knot.] The part between two successive nodes or joints, as of plant stem, of medullated nerve fibre; non-genetic segment of a chromosome.

**internodia** (in'ternō'diā) *n. plu.* Phalanges.

**internum** (in'tēr'nūm) *n.* [L. *internus*, inward.] Inner region or medulla of a mitochondrion or of Golgi apparatus.

**internuncial** (in'ternūn'siāl) *a.* [L. *inter*, between; *nuntius*, messenger.] Intercommunicating, as paths of transmission or nerve fibres; *appl.* neurone interposed between afferent and efferent nerve cells, association neurone.

**interoceptor** (in'tērōsēp'tōr) *n.* [L. *internus*, inside; *capere*, to take.] A receptor which receives stimuli from within the body; end-organ for visceral sensibility.

**interocular** (in'tērōk'ulār) *a.* [L. *inter*, between; *oculus*, eye.] Placed between the eyes.

**interoperculum** (in'tērōpēr'kulūm) *n.* [L. *inter*, between; *operculum*, lid.] A membrane bone of operculum of Teleostomi and Dipnoi, attached to mandible; interopercle.

**interoptic** (in'tērōp'tik) *a.* [L. *inter*, between; Gk. *optikos*, *pert.* sight.] Between optic lobes.

**interorbital** (in'tērōr'bitāl) *a.* [L. *inter*, between; *orbis*, circle.] Between the orbits; *appl.* septum of tropibasic skull; *appl.* sinus.

**interosculant** (in'tērōs'kulānt) *a.* [L. *inter*, between; *osculari*, to kiss.]

Possessing characters common to two or more groups or species.

**interosseous** (in'tērōs'ēūs) *a.* [L. *inter*, between; *os*, bone.] Occurring between bones; *appl.* arteries, membranes, muscles, nerves.

**interparietal** (in'tērpāri'ētāl) *a.* [L. *inter*, between; *paries*, wall.] In many vertebrates a bone arising between parietals and supra-occipital.

**interpeduncular** (in'tērpēdūng'kulār) *a.* [L. *inter*, between; *pedunculus*, little foot.] *Appl.* fossa between cerebral peduncles, and a ganglion.

**interpetaloid** (in'tērpēt'āloid) *a.* [L. *inter*, between; Gk. *petalon*, leaf; *eidos*, form.] Between petaloid areas of an echinoderm test.

**interpetiolar** (in'tērpēt'iōlār) *a.* [L. *inter*, between; *petiolus*, little foot.] Situated between petioles or bases of opposite leaves.

**interphalangeal** (in'tērfālān'jēāl) *a.* [L. *inter*, between; Gk. *phalangx*, line of battle.] *Appl.* articulations between successive phalanges.

**interphase** (in'tērfāz) *n.* [L. *inter*, between; Gk. *phasis*, aspect.] Resting stage between first and second mitotic divisions; interkinesis.

**interplacental** (in'tērplāsēn'tāl) *a.* [L. *inter*, between; *placenta*, flat cake.] Between placentae.

**interpleural** (in'tērploo'rāl) *a.* [L. *inter*, between; Gk. *pleuron*, side.] Between pleurae.

**interpositional growth**,—of cells, by interposition between neighbouring cells without loss of contact; intrusive growth. *Opp.* sliding growth.

**interpubic** (in'tērpū'bik) *a.* [L. *inter*, between; *pubes*, mature.] *Appl.* the fibrocartilaginous lamina between pubic bones.

**interracial** (in'tēr-rā'siāl) *a.* [L. *inter*, between; *radix*, root.] Between races or breeds; *appl.* hybridisation, differences, etc.

**interradial** (in'tēr-rā'diāl) *a.* [L. *inter*, between; *radius*, radius.] *Pert.* an interradius.

**interradium** (In'tēr-rā'diūm) *n.* [L. *inter*, between; *radius*, radius.] The area between two radii of any radially symmetrical animal.

**interradius** (In'tēr-rā'diūs) *n.* [L. *inter*, between; *radius*, radius.] The radius of a radiate animal halfway between two perradii.

**interramal** (In'tēr-rā'māl) *a.* [L. *inter*, between; *ramus*, branch.] Between branches or rami.

**interramicorn** (In'tēr-rām'ikōrn) *n.* [L. *inter*, between; *ramus*, branch; *cornu*, horn.] A piece of a bird's bill beyond mandibular rami forming the gonys.

**interrenal** (In'tēr-rē'nāl) *a.* [L. *inter*, between; *renes*, kidneys.] Between the kidneys; *appl.* veins.

**interrenal body**,—a gland, situated between kidneys of elasmobranchs, representing the adrenal cortex of higher vertebrates.

**interrupted** (In'tēr-rūp'tēd) *a.* [L. *inter*, between; *rumpere*, to break.] With continuity broken; irregular; asymmetrical.

**interruptedly pinnate**,—pinnate with pairs of small leaflets occurring between larger ones.

**interscapular** (In'tērskāp'ulār) *a.* [L. *inter*, between; *scapula*, shoulder-blade.] Between the shoulder-blades; *appl.* feathers; *appl.* brown fatty tissue, so-called hibernating gland, as in some rodents.

**intersegmental** (In'tērsegmēn'tāl) *a.* [L. *inter*, between; *segmentum*, piece.] Between segments; between spinal segments, *appl.* axons, septa.

**intersegmentalia** (In'tērseg'mēntā'liā) *n. plu.* [L. *inter*, between; *segmentum*, piece.] Sclerites between adjacent body segments in insects.

**interseptal** (In'tērseptāl) *a.* [L. *inter*, between; *septum*, fence.] Pert. spaces between septa or partitions.

**intersex** (In'tērseks) *n.* [L. *inter*, between; *sexus*, sex.] An organism with characteristics intermediate between typical male and typical female of its species; an organism first developing as a male or female,

then as an individual of the opposite sex; a sex mosaic in time; *cf.* gynandromorph.

**interspecific** (In'terspēs'tf'ik) *a.* [L. *inter*, between; *species*, kind.] Between distinct species; *appl.* crosses, as mule, hinny, cattalo, tigrion; *appl.* selection.

**interspicular** (In'terspik'ulār) *a.* [L. *inter*, between; *spiculum*, sharp point.] Occurring between spicules.

**interspinal** (In'terspī'nāl), **inter-spinous** (In'terspī'nūs) *a.* [L. *inter*, between; *spina*, spine.] Occurring between spinous processes or between spines; *appl.* bones, muscles, ligaments.

**interstapedial** (In'terstāpē'diāl) *a.* [L. *inter*, between; *stapes*, stirrup.] *Appl.* a part of columella of ear.

**intersterility** (In'terstēr'il'iti) *n.* [L. *inter*, between; *sterilis*, unfruitful.] Incapacity for interbreeding.

**intersternal** (In'terstēr'nāl) *a.* [L. *inter*, between; *sternum*, breast-bone.] Between the sterna; *appl.* ligaments connecting manubrium and body of sternum.

**intersternite** (In'terstēr-nīt) *n.* [L. *inter*, between; *sternum*, breast-bone.] A sternal sclerite between thoracic segments of insects; inter-segmental sternite; a furcasternite, *q.v.*

**interstitial** (In'terstish'iāl) *a.* [L. *inter*, between; *sistere*, to set.] Occurring in interstices or spaces; *appl.* growth; *appl.* lamellae between Haversian systems; *appl.* cells within tissues, *e.g.* within gonad tissues.

**intertemporal** (In'tertēm'pōrāl) *n.* [L. *inter*, between; *tempora*, temples.] A paired membrane bone, part of sphenoid complex, fusing with alisphenoids; dermosphenotic.

**intertentacular** (In'tertētāk'ulār) *a.* [L. *inter*, between; *tentaculum*, feeler.] Between tentacles; *appl.* a ciliated tube opening at base of tentacles and connecting coelom and exterior, found in Molluscoidea.

**intertergal** (Intértér'gäl) *a.* [L. *inter*, between; *tergum*, back.] Between tergites or dorsal sclerites.

**intertidal** (In'tértí'däl) *a.* [L. *inter*, between; A.S. *tid*, time.] *Appl.* shore organisms living between high- and low-water marks.

**intertrabecula** (In'tértrábék'ülä) *n.* [L. *inter*, between; *trabecula*, little beam.] A separate plate between the trabeculae anteriorly, in some birds.

**intertragic** (Intérträj'ík) *a.* [L. *inter*, between; Gk. *tragos*, goat.] *Appl.* notch between tragus and anti-tragus.

**intertrochanteric** (In'tértrökántér'ík) *a.* [L. *inter*, between; Gk. *trochanter*, runner.] Between trochanters; *appl.* crest, line.

**intertrochlear** (In'tértrök'lëär) *a.* [L. *inter*, between; *trochlea*, pulley.] *Appl.* an ulnar ridge fitting into a groove of the humerus.

**intertubercular** (In'tértübér'külär) *a.* [L. *inter*, between; *tuberculum*, small hump.] *Appl.* plane of body through tubercles of iliac crests; *appl.* sulcus between tubercles of humerus.

**intervarietal** (In'terväri'ëtäl) *a.* [L. *inter*, between; *varius*, diverse.] *Appl.* crosses between two distinct varieties of a species.

**interventricular** (In'tervëntrik'ülär) *a.* [L. *inter*, between; *ventricula*, small cavity.] Between ventricles; *appl.* foramen between third and lateral ventricles, foramen of Monro.

**intervertebral** (In'tervér'tëbräl) *a.* [L. *inter*, between; *vertebra*, vertebra.] Occurring between vertebrae; *appl.* discs, fibrocartilages, foramina, veins.

**intervillous** (In'tervíl'ús) *a.* [L. *inter*, between; *villi*, hairs.] Occurring between villi; *appl.* spaces in trophoblastic network filled with maternal blood.

**interxylary** (In'térzí'läri) *a.* [L. *inter*, between; Gk. *xylon*, wood.] Between xylem strands; *appl.* phloem.

**interzonal** (In'térzö'näl) *a.* [L. *inter*,

between; *zona*, belt.] Between two zones; *appl.* spindle fibres uniting groups of daughter chromosomes in anaphase of mitosis.

**interzoecial** (In'térzöë'siäl) *a.* [L. *inter*, between; *zoon*, animal; *oikos*, house.] Occurring among zoecia.

**intestinal** (Intës'tinäl, Intësti'näl) *a.* [L. *intestinus*, internal.] *Pert.* intestines; *appl.* glands, villi, etc.

**intestine** (Intës'tin) *n.* [L. *intestinus*, internal.] Part of alimentary canal from pylorus to anus, or part corresponding to this.

**intextine** (Intëk'stîn) *n.* [L. *intus*, within; *exter*, without.] An inner membrane of an extine.

**intima** (In'timä) *n.* [L. *intimus*, innermost.] The innermost lining membrane of a part or organ; tunica intima.

**intine** (In'tin) *n.* [L. *intus*, within.] The inner covering membrane of a pollen grain, or of a spore. *Opp.* extine.

**intra-biogenic** (In'träbïön'tik) *a.* [L. *intra*, within; Gk. *bios*, life; *on*, being.] *Appl.* a process of selection occurring in a living unit.

**intra-bulbar**,—intragammal, *q.v.*

**intracapsular** (In'träkáp'sülär) *a.* [L. *intra*, within; *capsula*, small chest.] Contained within a capsule; *appl.* protoplasm of Radiolaria; *appl.* dendrites.

**intracardiac** (In'träkâr'diäk) *a.* [L. *intra*, within; Gk. *kardia*, heart.] Endocardiac, *q.v.*

**intracartilaginous** (In'träkâr'tiläj'inüs) *a.* [L. *intra*, within; *cartilago*, gristle.] Inside the cartilage; *appl.* ossification; endochondral.

**intracellular** (In'trásël'ülär) *a.* [L. *intra*, within; *cellula*, little cell.] Within the cell.

**intracortical** (In'träkôr'tikäl) *a.* [L. *intra*, within; *cortex*, rind.] Within the cortex; uniting parts of brain cortex.

**intra-epithelial** (In'träëpithë'lial) *a.* [L. *intra*, within; Gk. *epi*, upon; *thele*, nipple.] Occurring in epithelium; *appl.* glands, usually

**intrafascicular** (in'träfāsik'ulār) *a.* [L. *intra*, within; *fasciculus*, little bundle.] Within a vascular bundle.

**intrafoliaceous** (in'träföllā'shūs) *a.* [L. *intra*, within; *folium*, leaf.] *Appl.* stipules encircling stem and forming a sheath; ochreate.

**intrafusil** (in'träfū'zāl) *a.* [L. *intra*, within; *fusus*, spindle.] *Appl.* fasciculi and fibres connected respectively with neurotendinous and neuromuscular spindles.

**intragemmal** (in'trājēm'āl) *a.* [L. *intra*, within; *gemma*, bud.] Within a taste-bud; *appl.* nerve fibres, spaces.

**intraglobular** (in'trāglōb'ulār) *a.* [L. *intra*, within; *globulus*, globule.] Occurring within a globule or corpuscle.

**intrajugular** (in'trājūg'ulār) *a.* [L. *intra*, within; *jugulum*, throat.] *Appl.* a process in middle of jugular notch of occipital bone.

**intralamellar** (in'trālāmēl'ār) *a.* [L. *intra*, within; *lamella*, thin plate.] Within a lamella; *appl.* trama of gill-bearing fungi.

**intralobular** (in'trālōb'ulār) *a.* [L. *intra*, within; *lobulus*, small lobe.] Occurring within lobules; *appl.* veins draining liver lobules.

**intramembranous** (in-trāmēm'brān-ūs) *a.* [L. *intra*, within; *membrana*, film.] *Appl.* bone developed in membrane.

**intramolecular** (in'trāmōlēk'ulār) *a.* [L. *intra*, within; F. *molécule*, small particle.] *Appl.* plant respiration from splitting up of complex substances within the cell.

**intranuclear** (in'trānū'klēār) *a.* [L. *intra*, within; *nucleus*, kernel.] Within the nucleus; *appl.* spindles, fibres, etc.

**intraparietal** (in'trāpāri'ētāl) *a.* [L. *intra*, within; *paries*, wall.] Enclosed within an organ; within parietal lobe, as sulcus, etc.

**intrapetalous** (in'trāpēt'ālūs) *a.* [L. *intra*, within; Gk. *petalon*, leaf.] Situated in a petaloid area, in echinoderms.

**intrapetiolar** (in'trāpēt'iōlār) *a.* [L.

*intra*, within; *petiolus*, little foot.]

Within the petiole base expansion.

**intrapleural** (in'trāploō'rāl) *a.* [L. *intra*, within; Gk. *pleuron*, side.] Within the thoracic cavity.

**intrasegmental** (in'trāsēgmēn'tāl) *a.* [L. *intra*, within; *segmentum*, part.] *Appl.* vertebra formed of cranial and caudal elements of same original myotome; *cf.* intermyotomic.

**intrasélection** (in'trāsēlēk'shūn) *n.* [L. *intra*, within; *selectio*, choice.] Selection within an organ, of cells fittest to survive.

**intrasexual** (in'trāsēk'sūāl) *a.* [L. *intra*, within; *sexus*, sex.] *Appl.* selection of competing individuals of the same sex.

**intraspecific** (in'trāspēsif'ik) *a.* [L. *intra*, within; *species*, particular kind; *facere*, to make.] Within a species; *appl.* selection of individuals.

**intraspicular** (in'trāspik'ulār) *a.* [L. *intra*, within; *spicula*, small spike.] Having spicules completely embedded in spongin.

**intrastelar** (in'trāstēl'ār) *a.* [L. *intra*, within; *stela*, pillar.] Within the stele of a stem or root; *appl.* ground tissue, bundles, etc.

**intratarsal** (in'trātār'sāl) *a.* [L. *intra*, within; *tarsus*, ankle.] Within the tarsus; *appl.* joint of reptilian limb between rows of tarsal bones.

**intrathyroid** (in'trāthī'roid) *a.* [L. *intra*, within; Gk. *thyreos*, shield; *eidos*, like.] *Appl.* a cartilage joining laminae of thyroid cartilage during infancy.

**intrauterine** (in'trāū'tērīn) *a.* [L. *intra*, within; *uterus*, womb.] Within the uterus.

**intravaginal** (in'trāvāj'īnāl) *a.* [L. *intra*, within; *vagina*, sheath.] Within vagina; contained within a sheath, as grass branches.

**intravascular** (in'trāvās'kulār) *a.* [L. *intra*, within; *vasculum*, small vessel.] Within blood-vessels.

**intraventricular** (in'trāvēntrik'ulār) *a.* [L. *intra*, within; *ventriculus*, small cavity.] Within a ventricle; *appl.* caudate nucleus of corpus

- striatum, seen within ventricle of brain.
- intravesical** (in'trævēs'ikāl) *a.* [L. *intra*, within; *vesica*, bladder.] Within the bladder.
- intravitelline** (in'trāvitēl'fn) *a.* [L. *intra*, within; *vitellus*, egg-yolk.] Within the yolk of an egg.
- intraxylary** (in'trāzi'lāri) *a.* [L. *intra*, within; Gk. *xylon*, wood.] Within the wood or xylem.
- intrinsic** (intrin'sik) *a.* [L. *intrinsecus*, inwards.] *Appl.* inner muscles, as of tongue, of syrinx, etc.; *appl.* brightness sensation due to differential retinal response to different wave-lengths. *Opp.* extrinsic.
- introitus** (intrō'itūs) *n.* [L. *introitus*, entry.] An opening or orifice.
- intromittent** (in'trōmit'ēt) *a.* [L. *intro*, within; *mittere*, to send.] Adapted for inserting; *appl.* male copulatory organs.
- introrse** (intrōrs') *a.* [L. *introrsus*, within.] Turned inwards or towards axis; as of anthers, opening on side next pistil.
- introvert** (in'trōvērt) *n.* [L. *intro*, within; *vertere*, to turn.] That which is capable of involution, as anterior region of body of certain zooids, of certain annulates, mouth extremity of certain molluscs. (in'trōvērt') *v.* To turn, bend, or draw inwards.
- intrusive growth**,—see interpositional growth.
- intussusception** (in'tüssüsēp'shūn) *n.* [L. *intus*, within; *suscipere*, to receive.] Growth in surface-extent or volume by intercalation of particles among those already present. *Opp.* accretion; *cf.* apposition.
- inulase** (in'ulās) *n.* [L. *inula*, elecampane.] A plant enzyme which hydrolyses inulin into laevulose.
- inulin** (in'ūlin) *n.* [L. *inula*, elecampane.] A carbohydrate occurring in rhizomes and roots of many plants, and forming laevulose when hydrolysed; dahlia starch; (C<sub>6</sub>H<sub>10</sub>O<sub>5</sub>)<sub>n</sub>.
- invaginate** (invāj'ināt) *v.* [L. *in*, into; *vagina*, sheath.] To involute or draw into a sheath; *appl.* in-sinking of wall of a cavity or vessel. *a.* Introverted; concave.
- invagination** (invāj'inā'shūn) *n.* [L. *in*, into; *vagina*, sheath.] Involution; introversion; gastrula-formation by infolding of blastula wall; ingestion by temporarily transformed periplast-like ectoplasm in certain Protozoa.
- inversion** (invēr'shūn) *n.* [L. *invertere*, to turn upside down.] Reversal in order of genes, or reversal of a chromosome segment, within the chromosome as a whole; a turning inward, inside out, or upside-down of a part.
- invertase** (invēr'tās) *n.* [L. *invertere*, to turn into.] A plant enzyme which converts cane sugar into dextrose and laevulose; invertin; sucrase.
- invertebrate** (invēr'tēbrāt) *a.* [L. *in*, not; *vertebra*, joint.] Back-boneless; without spinal column.
- investing bones**,—membrane bones.
- investment** (invēst'mēt) *n.* [L. *in*, in; *vestire*, to clothe.] Outer covering of a part, organ, animal, or plant.
- involute** (invöl'üsēl) *n.* [Dim. of L. *involutum*, covering.] The small bracts at base of a secondary umbel; a partial involucre.
- involute** (invöl'üsēl'āt) *a.* [Dim. of L. *involutum*, covering.] Bearing involuclles.
- involuclum**,—involucl.
- involucral** (in'völū'krāl) *a.* [L. *involutum*, covering.] *Pert.* or like an involucre.
- involucrate** (in'völū'krāt) *a.* [L. *involutum*, covering.] Bearing involuclles.
- involucre** (in'völū'kēr) *n.* [L. *involutum*, covering.] Bracts forming whorl at base of a condensed inflorescence, as of capitulum and umbel; a group of leaves surrounding antheridial and archegonial groups in bryophytes; involuclum.
- involucret**,—involucl, *q.v.*
- involutum** (in'völū'krēm) *n.* [L. *involutum*, covering.] In Hydro-medusae, protective cup into which

nematocysts can be spirally retracted; metanotum of Orthoptera; periosteal layer formed around dead portion of bone, in certain diseased conditions; an involucre, *q.v.*

**involuntary** (invöl'üntäri) *a.* [L. *in*, not; *voluntas*, wish.] Not under control of will; *appl.* plain unstriped muscles, as of alimentary canal, and to their movements.

**involute** (In'völüt) *a.* [L. *involutus*, rolled up.] Of leaves, having the edges rolled inwards at each side; of shells, closely coiled.

**involution** (In'völū'shūn) *n.* [L. *involutus*, rolled up.] Reduction to normal of enlarged, modified, or deformed conditions; shrinking of tissues in old age; *appl.* forms that have become deformed in structure, but not to such an extent as to be incapable of recovery; a rolling inwards, as of leaves; movement of cells to interior in a certain type of gastrulation; resting, *appl.* spores, stage, etc.

**iodophilic** (i'ödöfil'ik) *a.* [Gk. *ioeides*, violet-like; *philos*, loving.] Staining darkly in iodine solution; *appl.* certain cytoplasmic inclusions and vacuoles; iodophilous.

**iodopsin** (i'ödöpsin) *n.* [Gk. *ioeides*, violet; *opsis*, sight.] Visual violet of retinal cones, a photo-sensitive protein-vitamin A compound.

**iodothyron** (i'ödöthi'rīn) *n.* [Gk. *ioeides*, violet; *thyreos*, shield.] An iodine compound in the colloid material of thyroid gland.

**iodothyroglobulin** (i'ödöthi'röglöb'ülīn) *n.* [Gk. *ioeides*, violet; *thyreos*, shield; L. *globus*, globe.] Compound of iodothyron and nucleoprotein extractable hormone of the thyroid gland.

**iridial angle**,—filtration angle of eye: an angular recess between cornea and anterior surface of iris.

**iridocytes** (Ir'idösīts) *n. plu.* [Gk. *iris*, rainbow; *kytos*, hollow.] Guanin granules, bodies or plates, of which the reflecting tissue of skin of fishes is composed; iridescent cells in integument of Sepia.

**iridomotor** (Ir'idömō'tör) *a.* [L. *iris*, rainbow; *movere*, to move.] Connected with movements of iris.

**iridophores**,—iridocytes, *q.v.*

**iris** (i'ris) *n.* [L. *iris*, rainbow.] A thin, circular, contractile and vascular disc of eye between cornea and lens, and surrounding the pupil.

**iris cells**,—pigment cells surrounding cone and retinula of an ommatidium.

**irradiation** (Ir'rādīā'shūn) *n.* [L. *in*, into; *radius*, ray.] Treatment with rays, as ultra-violet rays, X-rays, etc.; the spreading of an effect of a stimulus; spreading of an excitatory process; apparent enlargement of objects, due to difference in illumination.

**irritability** (Ir'itābil'itī) *n.* [L. *irritare*, to provoke.] Power of receiving external impressions, and reacting to them, inherent in living matter.

**irritant** (Ir'itānt) *n.* [L. *irritare*, to provoke.] An external stimulus which provokes a response.

**irrorate** (irr'ōrāt) *a.* [L. *irrorare*, to bedew.] Covered as if by minute droplets; dotted with minute colour markings, as wings of certain butterflies.

**isadelphous** (isādēl'fūs) *a.* [Gk. *isos*, equal; *adelphos*, brother.] With equal number of stamens in two phalanges.

**isauxesis** (isōksē'sis) *n.* [Gk. *isos*, equal; *auxesis*, growth.] Growth of a part at the same rate as that of the whole; ontogenetic heterauxesis.

**ischadic** (is'kiād'ik), **ischial** (is'kiāl) *a.* [Gk. *ischion*, hip.] *Pert.* or in region of hip; *appl.* artery, vein, process of ischiopubic plate.

**ischiocapsular** (is'kiökāp'sulār) *a.* [Gk. *ischion*, hip; L. *capsula*, little chest.] *Appl.* a ligament joining capsular ligament and hip.

**ischiocavernosus** (is'kiökāv'ērno'sūs) *a.* [Gk. *ischion*, hip; L. *cavus*, hollow.] *Appl.* muscle between hip and corpora cavernosa; erector of penis, or of clitoris.



**ischioflexorius** (is'kiöflöksö'rîūs) *n.* [Gk. *ischion*, hip; L. *flexus*, bent.] Posterior thigh muscle in salamander, corresponding to semimembranosus.

**ischiopodite** (is'kiöpödit) *n.* [Gk. *ischion*, hip; *pous*, foot.] Proximal joint of walking legs of certain Crustacea, or of maxillipedes.

**ischiopubic** (is'kiöpü'bik) *a.* [Gk. *ischion*, hip; L. *pubes*, adult.] *Appl.* a gap or fenestra between ischium and pubis; *appl.* a median cartilaginous plate with median and lateral processes, in Dipnoi.

**ischiopubis** (is'kiöpü'bîs) *n.* [Gk. *ischion*, hip; L. *pubis*, adult.] The ischium of pterodactyls, pubis being excluded from acetabulum; a fused ischium and pubis.

**ischiorectal** (is'kiörék'täl) *a.* [Gk. *ischion*, hip; L. *rectus*, straight.] *Pert.* ischium and rectum; *appl.* fossa and muscles.

**ischium** (is'kiüm) *n.* [Gk. *ischion*, hip.] The ventral and posterior bone of each half of pelvic girdle of vertebrates except fishes; an ischiopodite.

**isidia** (is'id'lä) *n. plu.* [Gk. *isis*, plant; *idion*, *dim.*] Coral-like soredia on surface of some lichens. *Sing.* isidium.

**isidiferous** (i'sidif'erūs) *a.* [Gk. *isis*, plant; L. *ferre*, to bear.] Bearing isidia; isidophorous.

**isidioid** (is'id'loid) *a.* [Gk. *isis*, plant; *idion*, *dim.*; *eidos*, like.] Like an isidium.

**isidium**,—*sing.* of isidia.

**island of Reil** [*J. C. Reil*, German anatomist]. *Insula, q.v.*

**islets of Langerhans** [*P. Langerhans*, German anatomist]. Spherical or oval bodies scattered throughout the pancreas, concerned in metabolism of sugar in body; endocrine portion of pancreas.

**isoagglutinin** (i'söäglöot'inin) *n.* [Gk. *isos*, equal; L. *agglutinare*, to glue to.] Fertilizin or agglutinin of eggs which reacts on sperm of same species; *cf.* heteroagglutinin.

**isoagglutininogen** (i'söäglöot'in'öjën),

**isoaemagglutininogen** (i'söhëm'äglöot'in'öjën) *n.* [Gk. *isos*, equal; *haima*, blood; *genos*, birth; L. *agglutinare*, to glue to.] Substance producing agglutination of erythrocytes within the same blood group.

**isobilateral** (i'söbilät'eräl) *a.* [Gk. *isos*, equal; L. *bis*, twice; *latus*, side.] *Appl.* a form of bilateral symmetry where a structure is divisible in two planes at right angles.

**isobryonic** (i'söbrion'ik) *a.* [Gk. *isos*, equal; *bryein*, to proliferate.] Developing equally, as lobes of dicotyledonous embryo; isobryous.

**isocarpous** (i'sökär'pūs) *a.* [Gk. *isos*, equal; *karpos*, fruit.] Having carpels and perianth divisions equal in number.

**isocercal** (i'sösär'käl) *a.* [Gk. *isos*, equal; *kerkos*, tail.] With vertebral column ending in median line of caudal fin.

**isochela** (i'sökē'lä) *n.* [Gk. *isos*, equal; *chele*, claw.] A chela with two parts equally developed; a two-pronged or anchor-shaped spicule in certain sponges.

**isochromosome** (i'sökrö'mösöm) *n.* [Gk. *isos*, equal; *chroma*, colour; *soma*, body.] Chromosome with identical arms united in a median centromere; metacentric derived from telocentric chromosome.

**isochromous** (i'sökrö'müs) *a.* [Gk. *isos*, equal; *chroma*, colour.] Equally tinted; uniformly coloured; isochromatic, isochroous.

**isocortex** (i'sökôr'tëks) *n.* [Gk. *isos*, equal; L. *cortex*, bark.] The part of cerebral cortex made up of six layers of nerve-cells. *Opp.* allocortex.

**isocytic** (i'sösit'ik) *a.* [Gk. *isos*, equal; *kytos*, hollow.] With all cells equal.

**isodactylous** (i'södäk'tilūs) *a.* [Gk. *isos*, equal; *daktylos*, finger.] Having all digits of equal size.

**isodemic** (isödëm'ik) *a.* [Gk. *isos*, equal; *demos*, people.] With or *pert.* populations composed of an equal number of individuals; *appl.* lines on a map which pass through points representing equal population density.

**isodiametric** (i'sōdiāmēt'rik) *a.* [Gk. *isos*, equal; *dia*, through; *metron*, measure.] Having equal diameters; *appl.* cells or other structures; *appl.* rounded or polyhedral cells.

**isodont** (i'sōdōnt) *a.* [Gk. *isos*, equal; *odous*, tooth.] Having teeth all equal.

**isodynamic** (i'sōdīnām'ik) *a.* [Gk. *isos*, equal; *dynamis*, power.] Of equal strength; providing the same amount of energy; *appl.* foods.

**isogamete** (i'sōgāmēt') *n.* [Gk. *isos*, equal; *gametes*, spouse.] One of a pair of undifferentiated gametes.

**isogamous** (i'sōg'āmūs) *a.* [Gk. *isos*, equal; *gamos*, marriage.] Having the gametes alike.

**isogamy** (i'sōg'āmī) *n.* [Gk. *isos*, equal; *gamos*, marriage.] Union of similar gametes, or of similar unicells.

**isogenes** (i'sōjēnz) *n. plu.* [Gk. *isos*, equal; *genos*, descent.] Lines on a map which connect points where same gene frequency is found.

**isogenetic** (i'sōjēnēt'ik) *a.* [Gk. *isos*, equal; *genesis*, descent.] Arising from the same or a similar origin; of the same genotype; isogenous.

**isogenic** (i'sōjē'nīk) *a.* [Gk. *isos*, equal; *genos*, race.] Homozygous.

**isogenomatic** (i'sōjēnōmāt'ik) *a.* [Gk. *isos*, equal; *genos*, race.] Containing similar sets of chromosomes; *appl.* nuclei; isogenomic.

**isognathous** (i'sōg'nāthūs) *a.* [Gk. *isos*, equal; *gnathos*, jaw.] Having both jaws alike.

**isolate** (i'sōlāt) *n.* [It. *isola*, from; L. *insula*, island.] A breeding group restricted by isolation.

**isolateral** (i'sōlāt'erāl) *a.* [Gk. *isos*, equal; L. *latus*, side.] Having equal sides; *appl.* leaves with palisade tissue on both sides.

**isolation** (i'sōlā'shūn) *n.* [L. *insula*, island.] Separation from others; prevention of mating between breeding groups owing to spatial, topographical, ecological, phenological, physiological, genetic, or other barriers.

**isolecithal** (i'sōlē's'ithāl) *a.* [Gk. *isos*, equal; *lekithos*, yolk.] *Appl.* ova with yolk granules distributed nearly equally throughout egg substance.

**isomar**,—isophane, *q.v.*

**isomastigote** (i'sōmās'tīgōt) *a.* [Gk. *isos*, equal; *mastix*, whip.] Having flagella of equal length.

**isomere** (i'sōmēr) *n.* [Gk. *isos*, equal; *meros*, part.] A homologous structure or part.

**isomerous** (i'sōm'erūs) *a.* [Gk. *isos*, equal; *meros*, part.] Having equal numbers of different parts; *appl.* flowers with same number of parts in each whorl; exhibiting isomery.

**isometry** (i'sōm'ētri) *n.* [Gk. *isos*, equal; *metron*, measure.] Growth of a part at the same rate as the standard or the whole.

**isomorphic** (i'sōmôr'fik) *a.* [Gk. *isos*, equal; *morphe*, shape.] Superficially alike; isomorphous; *appl.* alternation of diploid and haploid phases in morphologically similar generations.

**isomorphism** (i'sōmôr'fizm) *n.* [Gk. *isos*, equal; *morphe*, shape.] Apparent similarity of individuals of different race or species.

**isomyaric** (i'sōmiār'ik) *a.* [Gk. *isos*, equal; *mys*, muscle.] With adductor muscles equal in size; isomyarian.

**isopedin** (i'sōp'edin) *n.* [Gk. *isopedos*, level.] Inner layer of laminated bony material in cosmoid and ganoid fish scales.

**isopetalous** (i'sōpēt'ālūs) *a.* [Gk. *isos*, equal; *petalon*, petal.] Having similar petals.

**isophane** (i'sōfān) *n.* [Gk. *isos*, equal; *phainein*, to show.] A line connecting all places within a region at which a biological phenomenon, *e.g.* flowering of a plant, occurs at the same time; isomar, phenocontour.

**isophene** (i'sōfēn) *n.* [Gk. *isos*, equal; *phainein*, to show.] A contour line delimiting area corresponding to a given frequency of a variant form; phenocontour.

**isophenous** (i'söfē'nūs) *a.* [Gk. *isos*, equal; *phainein*, to show.] Being of the same phenotype.

**isophytoid** (i'söfi'toid) *a.* [Gk. *isos*, equal; *phyton*, plant; *eidōs*, form.] An 'individual' of a compound plant not differentiated from the rest.

**isoplankt** (i'söplängkt) *n.* [Gk. *isos*, equal; *plangktos*, wandering.] Line representing, on a map, distribution of equal amounts of plankton, or of particular plankton species.

**isoploid** (i'söploid) *a.* [Gk. *isos*, equal; *aploos*, onefold.] With an even number of chromosome sets in somatic cells. *n.* An isoploid individual.

**isopodous** (isöp'ödūs) *a.* [Gk. *isos*, equal; *pous*, foot.] Having the legs alike and equal.

**isopogonous** (i'söpö'gönūs) *a.* [Gk. *isos*, equal; *pogon*, beard.] Of feathers, having the two webs equal and similar.

**isopolyploid** (i'söpöl'iploid) *a., n.* [Gk. *isos*, equal; *polys*, many; *aploos*, onefold; *eidōs*, form.] Polyploid with an even number of chromosome sets, as tetraploid, hexaploid, octoploid, etc.

**isopygous** (i'söp'igous) *a.* [Gk. *isos*, equal; *pyge*, rump.] With pygidium and cephalon of equal size; *appl.* trilobites.

**isospore** (i'söspör) *n.* [Gk. *isos*, equal; *sporos*, seed.] An agamete produced by schizogony; *opp.* anisospore.

**isoporous** (isös'pörūs, isöspör'ūs) *a.* [Gk. *isos*, equal; *sporos*, seed.] Having spores of one kind only; homosporous.

**isostemonous** (isöstēm'önūs) *a.* [Gk. *isos*, equal; *L. stemon*, warp.] Having stamens equal in number to that of sepals or of petals.

**isotelic** (i'sötél'ik) *a.* [Gk. *isos*, equal; *telos*, end.] Exhibiting, or tending to produce, the same effect; homoplastic; *appl.* food factors that can replace each other; *pert.* isotely.

**isotels** (i' tēlz) *n. plu.* [Gk. *isos*,

equal; *telos*, end.] Substances having the same physiological, *e.g.* nutritional, effect.

**isotely**,—homoplasty, *q.v.*

**isotomy** (isöt'ömi) *n.* [Gk. *isos*, equal; *temnein*, to cut.] Bifurcation repeated in a regular manner, as in crinoid brachia.

**isotonic** (isötön'ik) *a.* [Gk. *isos*, equal; *tonos*, strain.] Of equal tension; having equal osmotic pressure.

**isotonicity** (i'sötönis'iti) *n.* [Gk. *isos*, equal; *tonos*, tone.] Normal tension under pressure or stimulus.

**isotopic** (i'sötöp'ik) *a.* [Gk. *isos*, equal; *topos*, place.] *Pert.* isotopes, chemical elements having the same atomic number and identical chemical properties, but differing in atomic weight.

**isotropic** (i'sötöröp'ik) *a.* [Gk. *isos*, equal; *tropikos*, turning.] Singly refracting in polarised light, *appl.* the light stripes of voluntary muscle fibres; *opp.* anisotropic; symmetrical around longitudinal axis; not influenced in any one direction more than another, *appl.* growth rate; without pre-determined axes, as eggs; isotropous.

**isotropy** (isöt'röpi) *n.* [Gk. *isos*, equal; *trepein*, to turn.] Absence of predetermined axes in eggs.

**isotype** (i'sotip) *n.* [Gk. *isos*, equal; *typos*, pattern.] A specimen collected from the same plant as the holotype and at the same time.

**isozoic** (i'sözö'ik) *a.* [Gk. *isos*, equal; *zoon*, animal.] Inhabited by similar forms of animal life.

**isozoid** (i'sözö'oid) *n.* [Gk. *isos*, equal; *zoon*, animal; *eidōs*, like.] A zoid similar to parent stock.

**isthmiate** (isth'miāt) *a.* [Gk. *isthmos*, neck.] Connected by an isthmus-like part.

**isthmus** (isth'müs) *n.* [Gk. *isthmos*, neck.] A narrow structure connecting two larger parts, as those of aorta, acoustic meatus, limbic lobe, prostate, thyroid, etc., or between semi-cells; junction between perikaryon and axon-base.

**iter** (it'ër) *n.* [L. *iter*, way.] A passage or canal, as those of middle ear, brain, etc.; an aqueduct.

**ivory** (i'võr) *n.* [L. *ebur*, ivory, through F. *ivoire*.] Dentine of teeth, usually that of elephant's tusks and similar structures, formed from odontoblasts.

## J

**Jacobson's cartilage** [L. *L. Jacobson*, Danish anatomist]. Vomeranasal cartilage supporting Jacobson's organ.

**Jacobson's nerve**, — tympanic branch of the glossopharyngeal nerve.

**Jacobson's organ**, — a diverticulum of olfactory organ in many vertebrates, often developing into an epithelium-lined sac opening into mouth; vomeronasal organ.

**jactitation** (jăktită'shūn) *n.* [L. *jactare*, to toss.] Process of scattering seeds by censer mechanism, *q.v.*

**jaculator** (jăk'ulătör) *n.* [L. *jaculator*, shooter.] A placental process, usually hooked, of certain fruits.

**jaculatory** (jăk'ulătör) *a.* [L. *jaculatorius*, throwing.] Darting out; capable of being emitted.

**jaculatory duct**, — portion of vas deferens which is capable of being protruded, in many animals.

**jaculiferous** (jăk'ulif'ërüs) *a.* [L. *jaculum*, a dart; *ferre*, to carry.] Bearing dart-like spines.

**jarovization** (yăr'oviză'shūn) *n.* [Russ. *yarovizatsya*, from *yarovoi*, vernal.] Vernalisation, *q.v.*

**jaw** (jô) *n.* [Akin to *chaw*, *chew*.] A structure, of vertebrates, supported by bone or cartilage, naked or sheathed in horn, or bearing teeth or horny plates, forming part of mouth, and helping to open or shut it; a similarly placed structure in invertebrates.

**jaw foot**, — maxillipede of Arthropoda.

**J-disc**, — isotropic or I-disc, *q.v.*

**jecorin** (jĕk'orin) *n.* [L. *jecur*, liver.] A lecithin-like substance or phosphatide present in liver and other organs of the body.

**jejenum** (jĕjoon'üm) *n.* [L. *jejunos*, empty.] Part of small intestine between duodenum and ileum.

**jelly of Wharton** [*T. Wharton*, English anatomist]. The gelatinous connective tissue surrounding the vessels of umbilical cord.

**Johnston's organ** [*C. Johnston*, British entomologist]. A statal or chordotonal organ in second segment of insect antenna.

**joint** (joint) *n.* [O.F. *joindre*, from L. *jungere*, to join.] Place of union or separation of two parts, as between bones; articulation; a node; portion between two nodes or joints.

**Jordan's organ** [*K. Jordan*, zoologist]. The chaetosemata.

**juba** (joob'ă) *n.* [L. *juba*, mane.] A mane; a loose panicle.

**jubate** (joob'ăt) *a.* [L. *jubatus*, maned.] With mane-like growth.

**jugal** (joog'al) *n.* [L. *jugum*, yoke.] The malar bone, between maxilla and squamosal. *a. Pert.* a jugum.

**jugate** (joog'ăt) *a.* [L. *jugum*, yoke.] Having pairs of leaflets; furnished with a jugum.

**jugular** (jüg'ulăr, joog'ulăr) *a.* [L. *jugulum*, collar-bone.] *Pert.* neck or throat; *appl.* veins, foramen, fossa, etc.; *appl.* nerve, the hyoidean or posterior post-trematic nerve; *appl.* ventral fish-fins beneath and in front of pectoral fins.

**jugulum** (joog'ulüm) *n.* [L. *jugulum*, collar-bone.] The foreneck region of a bird's breast; in insects, the jugum of wing.

**jugum** (joog'üm) *n.* [L. *jugum*, yoke.] A pair of opposite leaflets; ridge on mericarp of umbelliferous plants; small lobe on posterior border of fore-wing of certain moths; ridge or depression connecting two structures; union of small sphenoidal wings in first year after birth.

**Jurassic** (joorās'ik) *a.* [*Jura* mountains.] *Pert.* or *appl.* Mesozoic period between Triassic and Cretaceous.

**juvenal** (joo'vënāl) *a.* [L. *juvenalis*, youthful.] Youthful; *appl.* plumage replacing nestling-down of first plumage.

**juvenile hormone**, — secreted by corpus allatum and inhibiting development of adult characters, in certain insects.

**juxta** (jūk'stā) *n.* [L. *juxta*, close to.] A ring-walled structure supporting sheath of aedeagus.

**juxtaglomerular** (jūk'stāglömēr'-ūlār) *a.* [L. *juxta*, close to; *glomerare*, to form into a ball.] *Appl.* cells surrounding arteriole of glomerulus of kidney.

**juxtannuclear** (jūk'stānū'klēār) *a.* [L. *juxta*, close to; *nucleus*, kernel.] *Appl.* bodies: basophil deposits in cytoplasm of vitamin D-deficient parathyroid cells.

## K

**kaino**, — *see* caeno-.

**kako**, — *see* caco-.

**kalidium** (kāl'id'ium) *n.* [*Dim.* of Gk. *kalia*, hut.] A form of sporocarp, or cystocarp.

**kalymma** (kāl'imā) *n.* [Gk. *kalymma*, covering.] Vacuolated part of outer layer of certain radiolarians.

**kalymmocytes** (kāl'imösits) *n. plu.* [Gk. *kalymma*, covering; *kytos*, cell.] In ascidians, certain follicle-cells which migrate into the egg after maturation.

**karyaster** (kär'iās'tēr) *n.* [Gk. *karyon*, nut, nucleus; *aster*, star.] A star-shaped group of chromosomes.

**karyenchyma** (kär'iēng'kimā) *n.* [Gk. *karyon*, nucleus; *enchyma*, infusion.] Nuclear sap; achromatin; karyochylema.

**karyogamy** (kär'ög'āmī) *n.* [Gk. *karyon*, nucleus; *gamos*, marriage.] Union and interchange of nuclear material.

**karyokinesis** (kär'ïökînē'sis) *n.* [Gk. *karyon*, nucleus; *kinesis*, movement.] Indirect cell-division; mitosis.

**karyology** (kär'ïöl'ögī) *n.* [Gk. *karyon*, nucleus; *logos*, discourse.] Nuclear cytology.

**karyolymph** (kär'ïölimf') *n.* [Gk. *karyon*, nucleus; L. *lymphā*, water.] Nuclear sap; karyenchyma.

**karyolysis** (kär'ïöl'isis) *n.* [Gk. *karyon*, nucleus; *lyein*, to loosen.] Supposed dissolution of the nucleus in mitosis; liquefaction of nuclear membrane.

**karyomere** (kär'ïömēr) *n.* [Gk. *karyon*, nucleus; *meros*, part.] In mitosis, a small vesicle into which a chromosome is converted in one type of nuclear construction; karyomerite.

**karyomicrosome** (kär'ïömī'krösöm) *n.* [Gk. *karyon*, nucleus; *mikros*, small; *soma*, body.] A nuclear granule.

**karyomite** (kär'ïömīt') *n.* [Gk. *karyon*, nucleus; *mitos*, thread.] A chromosome.

**karyomitome** (kär'ïömītōm') *n.* [Gk. *karyon*, nucleus; *mitoma*, network.] The nuclear thread-work.

**karyomitosis** (kär'ïömītō'sis) *n.* [Gk. *karyon*, nucleus; *mitos*, thread.] Indirect nuclear division; mitosis.

**karyon** (kär'ïōn) *n.* [Gk. *karyon*, nucleus.] The cell-nucleus.

**karyophans** (kär'ïöfānz') *n. plu.* [Gk. *karyon*, nucleus; *phainein*, to appear.] Microsomes or nucleus-like granules surrounded by an ovoid matrix, which form the spirone and axoneme in stalk of infusoria.

**karyophore** (kär'ïöfōr) *n.* [Gk. *karyon*, nucleus; *pherein*, to bear.] System of ectoplasmic fibrils or membranes for mooring the nucleus, in certain ciliates.

**karyoplasm** (kär'ïöplāzm) *n.* [Gk. *karyon*, nucleus; *plasma*, mould.] Nucleoplasm, the nuclear substance; *cf.* cytoplasm.

**karyorhexis** (kär'ïörēk'sis) *n.* [Gk. *karyon*, nucleus; *rhexis*, breaking.] Fragmentation of the nucleus.

**karyosome** (kär'ïösöm) *n.* [Gk. *karyon*, nucleus; *soma*, body.] A nucleolus of the 'net-knot' type; a chromosome; a special aggregation of chromatin in resting nucleus; the cell-nucleus itself; *cf.* plasmosome.

**karyosphere** (kär'ïösfēr) *n.* [Gk. *karyon* nucleus; *sphaira*, globe.] The large nucleolus from which arise all or most of the chromosomes of Protista.

**karyota** (kär'ïötä) *n. plu.* [Gk. *karyon*, nucleus.] Nucleated cells.

**karyotheca** (kär'ïöthē'kā) *n.* [Gk. *karyon*, nucleus; *theke*, covering.] The nuclear membrane.

**karyotin** (kär'ïötin) *n.* [Gk. *karyon*, nucleus.] Chromatin; nuclear substance.

**karyotype** (kär'ïötíp) *n.* [Gk. *karyon*, nucleus; *typos*, pattern.] Group of individuals with the same chromosome number and similar linear arrangement of genes in homologous chromosomes; chromosome complement of such a group.

**kata-**,—also *cata-*.

**katabolism** (kätäb'ölizm) *n.* [Gk. *kata*, down; *bole*, throw.] The destructive chemical processes in living organisms, *opp.* anabolism.

**katabolite** (kätäb'ölit) *n.* [Gk. *kata*, down; *bole*, throw.] Any product of katabolism, *e.g.* urea.

**katagenesis** (kät'äjēn'ēsís) *n.* [Gk. *kata*, down; *genesis*, descent.] Retrogressive evolution.

**katakinetic** (kät'äkínēt'ík) *a.* [Gk. *kata*, down; *kinein*, to move.] *Appl.* process leading to discharge of energy; *cf.* anakinetic.

**katakinetomeres** (kät'äkínēt'ömērz) *n. plu.* [Gk. *kata*, down; *kinein*, to move; *meros*, part.] Unreactive, stable, atoms or molecules.

**kataphase** (kät'äfāz) *n.* [Gk. *kata*, down; *phasis*, appearance.] The stages of mitosis from formation of chromosomes to division of cell; *cf.* anaphase.

**kataphoresis** (kät'äförē'sís) *n.* [Gk. *kata*, down; *pherein*, to carry.] Transfer of fluids through a mem-

brane from anode to kathode; electrical osmosis.

**kataphoric** (kätäför'ík) *a.* [Gk. *kata*, down; *pherein*, to carry.] *Appl.* passive action, the result of lethargy.

**kataplexy** (kät'äplēksi) *n.* [Gk. *kata*, down; *plessein*, to strike.] Condition of an animal feigning death; maintenance of a postural reflex induced by restraint or shock; cataplexis; *cf.* catalepsis.

**katastate** (kät'ästāt, kätäs'tāt) *n.* [Gk. *kata*, down; *stasis*, state.] Any product of katabolic activity of protoplasm; katabolite.

**katatrepsis** (kät'ätrep'sís) *n.* [Gk. *kata*, down; *trepein*, to turn.] Stage of decreasing movement in blastokinesis.

**katharobic** (kät'häröbík) *a.* [Gk. *katharos*, pure; *bios*, life.] Living in clean waters, *appl.* Protista; *opp.* saprobic.

**kathodic** (kät'höd'ík) *a.* [Gk. *kathodos*, descent.] Not arising in conformity with genetic spiral; *appl.* leaves.

**kation** (kät'ïön, kätí'ön) *n.* [Gk. *kata*, down; *ienai*, to go.] A positively charged ion which moves towards kathode or negative pole; *opp.* anion.

**Keber's organ** [G. A. F. Keber, German zoologist]. Pericardial glands in lamellibranchs.

**keel** (kēl) *n.* [A.S. *ceol*, ship.] The carina or breast-bone of flying birds; boat-shaped structure formed by two anterior petals of Leguminosae; ridge on blade or on other parts of grasses.

**kenenchyma** (kēnēng'kimä) *n.* [Gk. *kenos*, empty; *enchyma*, infusion.] A tissue devoid of its living contents, as cork.

**keph-**,—see *ceph-*.

**keraphyllous** (kēräfil'üs) *a.* [Gk. *keras*, horn; *phyllon*, leaf.] *Appl.* layer of a hoof between horny and sensitive parts.

**keratin** (kēr'ätín) *n.* [Gk. *keras*, horn.] A scleroprotein forming the basis of epidermal structures such as horns, nails, hairs.

**keratinisation** (kēr'ātīnīzā'shūn) *n.* [Gk. *keras*, horn.] State of becoming horny; *appl.* cells of epiderm developing in a horny material.

**keratogenous** (kērātōj'ēnūs) *a.* [Gk. *keras*, horn; *-genes*, producing.] Horn-producing.

**keratohyalin** (kēr'ātōhī'ālīn) *n.* [Gk. *keras*, horn; *hyalos*, glass.] Substance contained in stratum lucidum of skin.

**keratoid** (kēr'atoid) *a.* [Gk. *keras*, horn; *eidōs*, form.] Horny; resembling horn.

**keratose** (kēr'ātōs) *a.* [Gk. *keras*, horn.] Having horny fibres in skeleton, as certain sponges.

**kernel** (kēr'nēl) *n.* [A.S. *cyrnel*, small grain.] The inner part of a seed containing the embryo.

**ketogenic hormone**,—a preputitary principle which influences fat metabolism.

**key-fruit**,—winged achenes hanging in clusters, as of *Acer* and *Fraxinus*.

**key gene**,—oligogene, *q.v.*

**kidney** (kīd'nē) *n.* [A.S. *cwith*, womb; *neere*, kidney.] Nephros; paired organ which elaborates and excretes urine.

**kinaesthesia** (kīn'ēsthē'sīs) *n.* [Gk. *kinein*, to move; *aisthesis*, perception.] Perception of movement due to stimulation of muscles, tendons, and joints; proprioception.

**kinaesthetic** (kīn'ēsthēt'īk) *a.* [Gk. *kinein*, to move; *aisthesis*, perception.] *Pert.* sense of movement or muscular effort; *appl.* sense, area.

**kinase** (kīnās') *n.* [Gk. *kinein*, to move.] A substance which transforms zymogens to enzymes.

**kinesiodic** (kīn'ēsīōd'īk) *a.* [Gk. *kinesis*, movement; *hodos*, way.] *Pert.* motor nerve paths; *cf.* kinesiodic.

**kinesis** (kīnē'sīs) *n.* [Gk. *kinesis*, movement.] Random movement; locomotor reactions depending on intensity of stimulus; variation in linear or angular velocity.

**kinesodic** (kīn'ēsōd'īk) *a.* [Gk. *kinesis*, movement; *hodos*, way.] Conveying motor impulses.

**kinetic** (kīnēt'īk) *a.* [Gk. *kinein*, to

move.] Active; *appl.* function of movement, *opp.* static; energy employed in producing or changing motion; *appl.* division centre in cell-division.

**kinetoblast** (kīnē'tōblāst) *n.* [Gk. *kinein*, to move; *blastos*, bud.] Outer ciliated investment of aquatic larvae with special locomotor properties.

**kinetochore** (kīnē'tōkōr) *n.* [Gk. *kinein*, to move; *choros*, place.] Spindle-attachment or -insertion region; centromere.

**kinetogenesis** (kīnē'tōjēn'ēsis) *n.* [Gk. *kinein*, to move; *genesis*, descent.] The evolution theory that animal structures have been produced by animal movements.

**kinetomeres** (kīnē'tōmērz) *n. plu.* [Gk. *kinein*, to move; *meros*, part.] Molecules or atoms, reactive or stable, ana- and kata-kinetomeres.

**kinetonucleus** (kīnē'tōnū'klēūs) *n.* [Gk. *kinein*, to move; *L. nucleus*, kernel.] The secondary nucleus, kinetoplast, or parabasal body, in forms such as trypanosomes, in close connection with flagellum and undulating membrane; *cf.* tropho-nucleus.

**kinetoplasm** (kīnē'tōplāzm) *n.* [Gk. *kinein*, to move; *plasma*, something formed.] An iron-containing nucleo-protein forming a source of energy to Nissl granules.

**kinetoplast** (kīnē'tōplāst) *n.* [Gk. *kinein*, to move; *plastos*, formed.] Composite body formed by union of parabasal body with blepharoplast in some Mastigophora.

**kinetosome** (kīnē'tōsōm) *n.* [Gk. *kinein*, to move; *soma*, body.] One of a group of granules occupying the polar plate region in moss sporogenesis.

**kinoplasm** (kīn'ōplāzm) *n.* [Gk. *kinein*, to move; *plasma*, mould.] The substance of attraction-sphere, astral rays, and spindle-fibres; archiplasm; ergastoplasm.

**kinoplasmosomes** (kīn'ōplāz'mō-sōmz) *n. plu.* [Gk. *kinein*, to move; *plasma*, form; *soma*, body.] Phragmoplast fibres seen at periphery of cell plate.

**klado-**,—clado-, *q.v.*

**klasma-plates** (kláz'mă-plāts) *n. plu.* [Gk. *klasma*, fragment; *L. platus*, flat.] Small parts of compound ambulacral plates separated by growth pressure, in echinoids.

**kleisto-**,—also cleisto-, *q.v.*

**kleistogamous** (klistōg'āmūs) *a.* [Gk. *kleistos*, closed; *gamos*, marriage.] Fertilised in closed flowers.

**kleronomous** (klērōn'ōmūs) *a.* [Gk. *kleronomos*, heir.] Inherited; *appl.* paths in nervous system.

**klinokinesis** (klī'nōkinē'sis) *n.* [Gk. *klinein*, to slope; *kinesis*, movement.] Change in rate of change of direction, or angular velocity, due to intensity of stimulation; *cf.* *kinesis*.

**klon**,—clone, *q.v.*

**knee** (nē) *n.* [A.S. *cneow*, knee.] Genu; joint between femur and tibia; root-process of certain swamp-inhabiting trees.

**knephoplankton** (nē'ōplāngk'tōn) *n.* [Gk. *knephas*, twilight; *planktos*, wandering.] Plankton living at depths between thirty and five hundred metres; *cf.* *phaoplankton*, *skotoplankton*.

**knot** (nōt) *n.* [A.S. *cnota*, knot.] In wood, base of branch surrounded by new layers of wood and hardened by pressure; in nuclear meshwork, small particles of chromatin where meshes cross.

**Kölliker's canal** [*R. A. von Kölliker*, Swiss zoologist]. A canal leading from otocyst towards exterior, as in certain Cephalopoda.

**kolyone** (kōlī'ōn) *n.* [Gk. *kolyein*, to hinder.] Substance elaborated in, and conveyed from, a tissue or organ, which lessens or inhibits function of other tissues.

**komma** (kōm'ā) *n.* [Gk. *komma*, clause.] Sarcomere; incommma.

**koniocortex** (kōn'tōkōr'tēks) *n.* [Gk. *konis*, dust; *L. cortex*, bark.] Granular part of cortex, characteristic of sensory areas of brain.

**Krause's end-bulbs**,—*see* end-bulbs.

**Krause's membrane** [*W. J. F. Krause*, German anatomist]. The

single or double row of dots in the light transverse band of striated muscle; telophragma, *Z-disc*.

**Kupffer cells** [*K. W. von Kupffer*, German anatomist]. Stellate macrophages of liver sinuses.

**kyogenic** (kiōjēn'ik) *a.* [Gk. *kyesis*, pregnancy; *genos*, descent.] *Appl.* prepituitary hormone stimulating secretion of progesterin by corpora lutea.

**kyto-**,—cyto-, *q.v.*

## L

**labella** (lābēl'ā) *n.* [*L. labellum*, small lip.] Paraglossa of insects; *plu.* of labellum.

**labellate** (lābēl'āt) *a.* [*L. labellum*, small lip.] Furnished with labella or small lips.

**labelloid** (lābēl'oid) *a.* [*L. labellum*, small lip; Gk. *eidos*, form.] Like a labellum.

**labellum** (lābēl'ūm) *n.* [*L. labellum*, small lip.] The lower petal, morphologically posterior, of an orchid; two fused lateral staminodes, as in flower of Zingiberaceae; small lobe beneath labrum, or labial palp, in insects; proboscis lobe.

**labia** (lā'biā) *n. plu.* [*L. labium*, lip.] Lips; lip-like structures.

**labia cerebri**,—margins of cerebral hemispheres overlapping corpus callosum.

**labia majora**,—outer lips of vulva.

**labia minora**,—inner lips of vulva.

**labial** (lā'biāl) *a.* [*L. labium*, lip.] *Pert.* or resembling a lip.

**labial palp**,—lobe-like structure near mouth of molluscs; jointed appendage on labium of insects.

**labiate** (lā'biāt) *a.* [*L. labium*, lip.] Lip-like; possessing lips or thickened margins; having limb of calyx or corolla so divided that one portion overlaps the other.

**labiatiflorous** (lā'biātifiō'rūs) *a.* [*L. labium*, lip; *flos*, flower.] Having the corolla divided into two lip-like portions.



**labidophorous** (lāb'īdōf'ōrūs) *a.* [Gk. *labis*, forceps; *pherein*, to carry.] Possessing pincer-like organs.

**labiella** (lā'bīēl'ā) *n.* [L. *labium*, lip.] A mouth-part of Myriopoda.

**labile** (lā'bīl, lāb'īl) *a.* [L. *labilis*, apt to slip.] Readily undergoing change; unstable; *appl.* genes that are constantly mutating.

**labiodental** (lā'bīōdēn'tāl) *a.* [L. *labium*, lip; *dens*, tooth.] *Pert.* lip and teeth; *appl.* an embryonic lamina; *appl.* labial surface of tooth.

**labiosternite** (lā'bīōstēr'nīt) *n.* [L. *labium*, lip; *sternum*, breast-bone.] A median area between palpifers of insect head.

**labiostipes** (lā'bīōstī'pēz) *n.* [L. *labium*, lip; *stipes*, stalk.] A portion of basal part of insect labium.

**labipalp** (lā'bīpālp) *n.* [L. *labium*, lip; *palpare*, to feel.] Labipalpus, labial palp of insects.

**labium** (lā'bīūm) *n.* [L. *labium*, lip.] A lip, or lip-shaped structure; the fused second maxillae of insects. *Plu.* labia.

**labral** (lā'brāl) *a.* [L. *labrum*, lip.] *Pert.* a labrum.

**labrocyte** (lāb'rōsīt) *n.* [Gk. *labros*, greedy; *kytos*, hollow.] A mast cell.

**labrum** (lā'brūm) *n.* [L. *labrum*, lip.] Anterior lip of certain arthropods; hypostoma of trilobites; outer margin of mouth of gastropod shell; ring of fibrocartilage, ambon, *q.v.*

**labyrinth** (lāb'īrīnth) *n.* [L. *labyrinthus*, labyrinth.] The complex internal ear, bony or membranous; lateral mass of air-cells of ethmoidal bone; portions of kidney cortex with uriniferous tubules; tracheal tympanum.

**labyrinthodont** (lāb'īrīnthōdōnt) *a.* [Gk. *labyrinthos*, labyrinth; *odous*, tooth.] Having teeth with great complexity of dentine arrangement.

**lac** (lāk) *n.* [Persian, *lak*, lacquer.] A resinous secretion of lac glands of certain Coccidae, composition depending on the food plant.

**laccate** (lāk'āt) *a.* [It. *lacca*, varnish.] Appearing as if varnished.

**lacerated** (lās'ērātēd) *a.* [L. *lacerare*, to tear.] Having margin or apex deeply cut into irregular lobes.

**lacertiform** (lāsēr'tifōrm) *a.* [L. *lacerta*, lizard; *forma*, shape.] Having the shape of a lizard.

**lacertus** (lāsēr'tūs) *n.* [L. *lacertus*, arm-muscle.] *Lacertus fibrosus*, aponeurosis of tendon of biceps muscle of the arm; bicipital fascia.

**lachrymal**,—lacrimal, *q.v.*

**lacinia** (lāsīn'īā) *n.* [L. *lacinia*, flap.] Segment of an incised leaf; slender projection from margin of a thallus; extension of posterior margin of proglottis over anterior part of following proglottis; inner division of endopodite or stipes of maxilla of insects; fimbria, *q.v.*

**laciniate** (lāsīn'īāt) *a.* [L. *lacinia*, flap.] Irregularly incised, as petals; fringed; *appl.* a ligament of the ankle, the internal annular ligament.

**laciniform** (lāsīn'īfōrm) *a.* [L. *lacinia*, flap; *forma*, shape.] Shaped like lacinia; fringe-like.

**lacinula** (lāsīn'ūlā) *n.* [L. *lacinia*, *dim.*, flap.] Small lacinia; inflexed sharp point of petal.

**lacinulate** (lāsīn'ūlāt) *a.* [L. *lacinia*, *dim.*, flap.] Having lacinulae.

**lacrimal** (lāk'rīmāl) *a.* [L. *lacrima*, tear.] Secreting or *pert.* tears; *pert.* or situated near lacrimal organ; *appl.* artery, bone, duct, glands, nerve, papillae, sac; also lachrymal.

**lacrimonasal** (lāk'rīmōnā'zāl) *a.* [L. *lacrima*, tear; *nasus*, nose.] *Pert.* lacrimal and nasal bones or duct.

**lacrimose** (lāk'rīmōs) *a.* [L. *lacrima*, tear.] Bearing tear-shaped appendages, as gills of certain fungi.

**lactalbumin** (lāk'tālbū'mīn) *n.* [L. *lac*, milk; *albumen*, egg-white.] An albumin found in milk.

**lactase** (lāk'tās) *n.* [L. *lac*, milk.] An intestinal enzyme converting lactose into glucose and galactose; also found in certain plants.

- lactation** (lăktă'shŭn) *n.* [*L. lac*, milk.] Secretion of milk in mammary glands; period during which milk is secreted.
- lacteals** (lăk'tēalz) *n. plu.* [*L. lac*, milk.] Chyliferous or lymphatic vessels of small intestine; ducts which carry latex.
- lactescent** (lăktēs'ēnt) *a.* [*L. lactescere*, to turn to milk.] Producing milk; yielding latex.
- lactic** (lăk'tik) *a.* [*L. lac*, milk.] *Pert.* milk; *appl.* bacilli, acid.
- lactiferous** (lăktif'ērūs) *a.* [*L. lac*, milk; *ferre*, to carry.] Forming or carrying milk; carrying latex.
- lactochrome** (lăk'tōkrōm) *n.* [*L. lac*, milk; *Gk. chroma*, colour.] A nitrogenous colouring matter in milk; lactoflavin, *q.v.*
- lactoflavin** (lăk'tōflā'vin) *n.* [*L. lac*, milk; *flavus*, yellow.] Vitamin B<sub>2</sub>; riboflavin, *q.v.*; C<sub>17</sub>H<sub>20</sub>O<sub>6</sub>N<sub>4</sub>.
- lactogenic** (lăk'tōjēn'ik) *a.* [*L. lac*, milk; *Gk. -genes*, producing.] *Pert.*, or stimulating, secretion of milk; *appl.* a preputitary hormone inducing secretion of milk in mammals and of crop milk in the pigeon; *appl.* interval between parturition and ovulation, or between parturition and menstruation.
- lactoglobulin** (lăk'tōglōb'ŭlin) *n.* [*L. lac*, milk; *globulus*, *dim.* of *globus*, globe.] The specific protein of milk, insoluble in water.
- lactoproteid** (lăk'tōprō'tēid) *n.* [*L. lac*, milk; *Gk. protos*, first; *eidos*, form.] Any milk proteid.
- lactose** (lăk'tōs) *n.* [*L. lac*, milk.] Milk-sugar, C<sub>12</sub>H<sub>22</sub>O<sub>11</sub>.
- lacuna** (lăkū'nā) *n.* [*L. lacuna*, cavity.] A space between cells; sinus; urethral follicle; cavity in bone; small cavity or depression on surface in lichens; a leaf gap. *Plu.* lacunae.
- lacunar** (lăkū'nār) *a.* [*L. lacuna*, cavity.] Having, resembling, or *pert.* lacunae.
- lacunate** (lăkū'nāt) *a.* [*L. lacuna*, a hollow.] Lacunar; *pert.* lacunae; *appl.* collenchyma, with cell-walls thickened where bordering intercellular spaces.
- lacunose** (lăkū'nōs) *a.* [*L. lacuna*, cavity.] Having many cavities; pitted.
- lacunosorugose** (lăkū'nōsōroo'gōs) *a.* [*L. lacuna*, cavity; *rugosus*, wrinkled.] Having deep furrows or pits, as some seeds and fruits.
- lacus lacrimalis**,—the triangular space between eyelids which contains lacrimal caruncle and receives tears from orifices of the lacrimal ducts.
- lacustrine** (lăkūs'trīn) *a.* [*L. lacus*, lake.] *Pert.* or living in or beside lakes.
- laetotropic** (lē'ōtrōp'ik), **laetotropic** (lēōt'rōpūs) *a.* [*Gk. laios*, left; *trope*, turning.] Inclined, turned, or coiled to the left.
- laevulose** (lē'vŭlōs) *n.* [*L. laevus*, left.] Fruit-sugar; fructose, C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>.
- lagena** (lăgē'nā, lăjē'nā) *n.* [*L. lagena*, flask.] Terminal portion of the cochlear duct or scala media.
- lageniform** (lăgē'nifōrm, lăjē'nifōrm) *a.* [*L. lagena*, flask; *forma*, shape.] Shaped like a flask.
- lagopodous** (lăgōp'ōdūs) *a.* [*Gk. lagos*, hare; *pous*, foot.] Possessing hairy or feathery feet.
- Lamarckian** (lāmārk'īān) *a.* [*J.-B. de Lamarck*, French biologist]. Of or *pert.* theories put forward by Lamarck.
- Lamarckism** (lāmārk'īzm) *n.* The evolution theory of Lamarck, embodying the principle that acquired characteristics are transmissible.
- lambda** (lām'dā) *n.* [*Gk. λ*, lambda.] The junction of lambdoid and sagittal sutures.
- lambdoid** (lām'doid) *a.* [*Gk. λ*, lambda; *eidos*, form.] λ-shaped; *appl.* the cranial suture joining occipital and parietal bones.
- lamella** (lāmēl'ā) *n.* [*L. lamella*, small plate.] Any thin plate- or scale-like structure; the gill of an agaric.

**lamellar** (lāmēl'ār), **lamellate** (lām'ēlāt) *a.* [L. *lamella*, small plate.] Composed of, or possessing thin plates.

**lamellibranchiate** (lāmēl'ībrāng'kiāt) *a.* [L. *lamella*, small plate; *branchiae*, gills.] Having plate-like gills on each side; with bilaterally compressed symmetrical body, like a bivalve.

**lamellicorn** (lāmēl'ikōrn) *a.* [L. *lamella*, small plate; *cornu*, horn.] Having antennal joints expanded into flattened plates.

**lamelliferous** (lām'ēlif'ērūs) *a.* [L. *lamella*, small plate; *ferre*, to carry.] Having small plates or scales.

**lamelliform** (lāmēl'ifōrm) *a.* [L. *lamella*, small plate; *forma*, shape.] Plate-like.

**lamellirostral** (lāmēl'irōs'trāl) *a.* [L. *lamella*, small plate; *rostrum*, beak.] Having inner edges of bill bearing lamella-like ridges.

**lamina** (lām'inā) *n.* [L. *lamina*, plate.] A thin layer, or scale; blade of leaf; one of thin plate-like expansions of sensitive tissue which fit into grooves on inside of horse-hoof.

**lamina choriocapillaris**,—capillary plexus constituting inner layer of choroid.

**lamina cribrosa**,—cribriform plate, *q.v.*; membranous portion of sclera at site of attachment of optic nerve and with perforations for axons of ganglion cells of retina.

**lamina perpendicularis**,—median process of mesethmoid or ethmoid forming proximal or bony part of nasal septum.

**lamina terminalis**,—thin layer of grey matter forming anterior boundary of third ventricle of brain.

**lamina vasculosa**,—outer layer of choroid beneath suprachoroid membrane.

**laminar** (lām'inār), **laminiform** (lām'inifōrm) *a.* [L. *lamina*, plate; *forma*, shape.] Consisting of plates or thin layers; laminous.

**laminarian** (lām'inā'rīān) *a.* [*Lamin-*

*aria*, a genus of brown seaweeds.] *Appl.* zone between low water to about fifteen fathoms.

**lamination** (lām'inā'shūn) *n.* [L. *lamina*, plate.] The formation of thin plates or layers; arrangement in layers, as nerve cells of cerebral cortex.

**laminipantar** (lām'inīplān'tār) *a.* [L. *lamina*, plate; *planta*, sole of foot.] Having scales of metatarsus meeting behind in a smooth ridge.

**lanate** (lā'nāt) *a.* [L. *lana*, wool.] Woolly; covered with short hair-like processes giving woolly appearance to surface.

**lance-linear** (lāns'-līn'ēār) *a.* [L. *lancea*, lance; *linea*, line.] Between lanceolate and linear in form.

**lance-oblong** (lāns'-ōb'lōng) *a.* [L. *lancea*, lance; *oblongus*, oblong.] Oblong with tapering ends.

**lanceolate** (lān'sēōlāt) *a.* [L. *lan- ceola*, little lance.] Slightly broad, or tapering, at base and tapering to point; lance-shaped.

**lance-oval** (lāns'-ō'vāl), **lance-ovate** (lāns'-ō'vāt) *a.* [L. *lancea*, lance; *ovalis*, oval.] Having a shape intermediate between lanceolate and oval.

**lancet** (lān'sēt) *n.* [F. *lancette*, from L. *lancea*, lance.] Stylet of sting, as in bees.

**lancet - plates**,—plates supporting water-vascular vessels of Blastoidea.

**Langerhans**,—see follicles, islets.

**Langhans' cells** [*T. Langhans*, German histologist]. Giant cells of inner layer of trophoblast or layer of Langhans.

**linguet**, **linguette** (lānggēt') *n.* [F. *linguette*, small tongue.] A process on branchial sac of ascidians.

**laniary** (lān'iārī) *a.* [L. *laniare*, to tear to pieces.] Term *appl.* to canine tooth.

**lantern**,—see Aristotle's lantern.

**lanthanin** (lānthā'nīn) *n.* [Gk. *lanthanein*, to conceal.] Oxychromatin; linin, *q.v.*

**lanuginous** (lānū'jīnūs) *a.* [L. *lanugo*, down.] Covered with down; cf. lanate.

**lanugo** (lānū'gō) *n.* [L. *lanugo*, down.] The downy covering on a foetus, begins to be shed before birth.

**lapidicolous** (lāp'idik'ölūs) *a.* [L. *lapis*, stone; *colere*, to cultivate.] *Appl.* animals that live under stones.

**lapillus** (lāpil'ūs) *n.* [L. *lapillus*, pebble.] A small otolith in utriculus of teleosts.

**lappaceous** (lāpā'shūs) *a.* [L. *lappa*, bur.] Prickly.

**lappet** (lāp'ēt) *n.* [M.E. *lappe*, loose hanging part.] One of paired lobes extending downwards from distal end of stomodaeum in jelly-fish; lobe of a sea-anemone gullet; wattle of a bird.

**larmier** (lār'myēr) *n.* [F. *larme*, tear.] Tear pit; saccus lacrimalis.

**larva** (lār'vā) *n.* [L. *larva*, ghost.] An embryo which becomes self-sustaining and independent before it has assumed the characteristic features of its parents.

**larval** (lār'vāl) *a.* [L. *larva*, ghost.] *Pert.* a larva; in the larval stage.

**larviform** (lār'vifōrm) *a.* [L. *larva*, ghost; *forma*, shape.] Shaped like a larva.

**larviparous** (lār'vip'ārūs) *a.* [L. *larva*, ghost; *parere*, to produce.] Producing live larvae.

**larvivorous** (lār'viv'örūs) *a.* [L. *larva*, ghost; *vorare*, to devour.] Larva-eating.

**larvule** (lār'vül) *n.* [L. *larvula*, small larva.] Young larva.

**laryngeal** (lār'in'jēäl) *a.* [Gk. *larynx*, upper part of windpipe.] *Pert.* or near the larynx; *appl.* artery, vein, nerve, etc.

**laryngopharynx** (lār'ing'gōfār'ingks) *n.* [Gk. *larynx*, larynx; *pharynx*, gullet.] Part of pharynx between soft palate and oesophagus.

**laryngotracheal** (lār'ing'gōtrā'kēäl) *a.* [Gk. *larynx*, windpipe; L. *trachea*, trachea.] *Pert.* larynx and trachea; *appl.* embryonic groove and tube.

**larynx** (lār'ingks) *n.* [Gk. *larynx*, larynx.] The organ of voice in most vertebrates, except birds.

**asso-cells**,—filamented hemispheri-

cal adhesive cells, investing tentacles of Ctenophora.

**lata-type**,—a mutant with one or more supernumerary chromosomes as compared with its parent (from *Oenothera lata*).

**latebra** (lāt'ēbrā) *n.* [L. *latebra*, hiding-place.] The bulb or flask-shaped mass of white yolk in eggs.

**latebricole** (lāt'ēbrikōl) *a.* [L. *latebra*, hiding-place; *colere*, to inhabit.] Inhabiting holes.

**latent** (lāt'tēnt) *a.* [L. *latens*, hidden.] Lying dormant but capable of development under favourable circumstances; *appl.* buds, resting stages, characters.

**latent bodies**,—the resting stage of certain Haemoflagellata.

**latent period**,—the time interval between completion of presentation of a stimulus and the beginning of a reaction; reaction time.

**lateral** (lāt'ērāl) *a.* [L. *latus*, side.] *Pert.* or situated at a side; or at a side of an axis.

**lateral chain theory**,—see side-chain.

**lateral line**,—longitudinal line at each side of body of fishes marking position of sensory cells.

**lateral mesenteries**,—the mesenteries of Zoantharia, excluding directive or dorsal and ventral pairs.

**lateralial** (lāt'ērāl'liā) *n. plu.* [L. *latus*, side.] The lateral plates of Cirripedia.

**laterigrade** (lāt'ērigrād) *a.* [L. *latus*, side; *gradus*, step.] Walking sideways, as a crab.

**laterinerved** (lāt'ēr'inērvd') *a.* [L. *latus*, side; *nervus*, sinew.] With lateral veins.

**laterite** (lāt'ērīt) *n.* [L. *later*, brick.] *Appl.* tropical red soils containing alumina and iron oxides and little silica owing to leaching under hot, moist conditions.

**laterocranium** (lāt'ērōkrā'nīüm) *n.* [L. *latus*, side; *cranium*, skull.] Area of insect head comprising genae and postgenae.

**latero-sensory** (lāt'ērōsēn'sōrī) *a.* [L. *latus*, side; *sensus*, sense.] *Appl.* system of lateral sense-organs in fishes, or lateral line system.

**laterosternites** (lät'ēröstēr'nīts) *n. plu.*

[*L. latus*, side; *sternum*, breast-bone.] Sclerites at side of eusternum, as in Dermaptera and Isoptera.

**laterotergites** (lät'ērötēr'jīts) *n. plu.*

[*L. latus*, side; *tergum*, back.] Small sclerites adjoining tergum of abdominal segments in some crustaceans and insects.

**latex** (lă'tēks) *n.* [*L. latex*, a liquid.]

A milky, or clear, sometimes coloured, juice or emulsion of diverse composition found in some plants, as in spurges, rubber trees, certain agarics, etc.

**laticifer** (lătis'ifer) *n.* [*L. latex*, a liquid; *ferre*, to carry.]

Any latex-containing cell, series of cells, or duct.

**laticiferous** (lăt'isif'ērūs) *a.* [*L. latex*,

a liquid; *ferre*, to carry.] Conveying latex; *appl.* cells, tissue, vessels.

**latiplantar** (lăt'iplăn'tăr) *a.* [*L. latus*,

side; *planta*, sole of foot.] Having hinder tarsal surface rounded.

**latirostral** (lăt'irös'träl) *a.* [*L. latus*,

broad; *rostrum*, beak.] Broad-beaked.

**latiseptate** (lăt'isēp'tāt) *a.* [*L. latus*,

broad; *septum*, septum.] Having a broad septum in the silicula.

**latitudinal furrow**,—one running

round a segmenting egg above and parallel to the equatorial.

**Laurer-Stieda canal**,—a canal leading

from junction of oviduct and vitelline duct to opening on dorsal surface in trematodes.

**laurinoxylon** (lôr'inözi'lön) *n.* [*L.*

*laurus*, laurel; *Gk. xylon*, wood.] Any fossil wood.

**law of acceleration**,—the generalisa-

tion that organs of greater importance develop more quickly.

**lax** (läks) *a.* [*L. latus*, loose.] Loose,

as *appl.* panicle.

**layer of Langhans** [*T. Langhans*,

German histologist]. Cytotrophoblast.

**leader** (lē'dēr) *n.* [*A.S. laedan*, to

lead.] Highest shoot or part of trunk of a tree.

**leaf** (lēf) *n.* [*A.S. leaf*, leaf.] An

expanded outgrowth of a stem, usually green.

**leaf-buttress**,—lateral prominence on shoot axis, due to underlying leaf primordium, representing leaf-base.

**leaf-cushions**,—prominent persistent leaf-bases, furnishing diagnostic characters in certain extinct plants.

**leaf-gap**,—mesh of stelar network, corresponding to site of leaf attachment in ferns; gap in vascular cylinder of stem, a parenchymatous region associated with leaf-traces; lacuna.

**leaflet**,—a small leaf; individual unit of a compound leaf.

**leaf-stalk**,—petiole.

**leaf-trace**,—vascular bundles extending from stem bundles to leaf-base. *Cf.* girdle bundles.

**leberidocytes** (lēbērī'dösits) *n. plu.*

[*Gk. leberis*, exuvia; *kytos*, hollow.] Cells containing glycogen, and developing from and regressing to leucocytes, found in blood of Arachnida at moulting.

**lechriond** (lēk'riödönt') *a.* [*Gk.*

*lechrios*, crosswise; *odontos*, tooth.] With vomerine and pterygoid teeth in a row nearly transverse.

**lecithalbumin** (lē's'ithälbü'min) *n.*

[*Gk. lekithos*, egg-yolk; *L. albumen*, white of egg.] A substance, consisting of albumin and lecithin, of various body organs.

**lecithelles** (lē's'ithēlz) *n. plu.* [*Gk.*

*lekithos*, egg-yolk.] Yolk granules in hypoblastic or other lecithoblasts.

**lecithin** (lē's'ithīn) *n.* [*Gk. lekithos*,

egg-yolk.] A phosphorised fat or phospholipide of cell-protoplasm.

**lecithoblast** (lē's'ithöbläst) *n.* [*Gk.*

*lekithos*, egg-yolk; *blastos*, bud.] In developing eggs, the yolk-containing blastomeres.

**lecithocoele** (lē's'ithösēl) *n.* [*Gk. leki-*

*thos*, egg-yolk; *koiolos*, hollow.] Segmentation cavity of holoblastic eggs.

**lectoallotype** (lēk'töäl'ötīp) *n.* [*Gk.*

*lektos*, chosen; *allos*, other; *typos*, pattern.] A specimen of the opposite sex to that of the lectotype and subsequently chosen from the original material.

**lectotype** (lĕk'tōtĭp) *n.* [Gk. *lektos*, chosen; *typos*, pattern.] A specimen chosen from syntypes to designate type of species.

**legume** (lēg'ūm) *n.* [L. *legumen*, pulse.] Dehiscent one-celled, two-valved carpel, as pod of pea or bean.

**legumin** (lēgū'mĭn) *n.* [L. *legumen*, pulse.] A globulin found in seeds of Leguminosae.

**leiотrichous** (liōt'rĭkūs) *a.* [Gk. *leios*, smooth; *thrix*, hair.] Having straight hair; leiотhric.

**leiotropic**,—laeotropic, *q.v.*

**lemma** (lēm'ă) *n.* [Gk. *lemma*, husk.] A valve or flowering glume; lower or outer palea, bract with axillary flower.

**lemniscus** (lēmnĭs'kūs) *n.* [Gk. *lemniskos*, fillet.] One of paired club-shaped organs at base of acanthocephalan proboscis; a fillet of fibres on each side of cerebral peduncles.

**lentic** (lēnĭt'ĭk) *a.* [L. *lenis*, smooth.] Lentic, *q.v.*

**lens** (lēnz) *n.* [L. *lens*, lentil.] A transparent part of eye, which focuses rays of light on retina; crystalline lens; modified portion of cornea in front of each element of a compound eye.

**lentic** (lēn'tĭk) *a.* [L. *lentus*, slow.] *Appl.* or *pert.* standing water; living in swamp, pond, or lake; lentic. *Opp.* lotic.

**lenticel** (lēn'tĭsĕl) *n.* [L. *lens*, lentil.] Ventilating pore in angiosperm stems or roots; canal in cork; a lenticular gland.

**lenticular** (lēntĭk'ulār) *a.* [L. *lenticula*, *dim.* of *lens*, lentil.] Shaped like a double convex lens; lentiform; *appl.* glands, lymphoid structures between pyloric glands. *n.* Tip of incus articulating with stapes, often ossified as a separate unit.

**lenticulate** (lēntĭk'ulāt) *a.* [L. *lens*, lentil.] Meeting in a sharp point; depressed, circular, and frequently ribbed.

**lentiform** (lēn'tĭfōrm) *a.* [L. *lens*,

lentil; *forma*, shape.] Lentil-shaped; lenticular; *appl.* nucleus, the extraventricular portion of corpus striatum.

**lentigerous** (lēntij'ērūs) *a.* [L. *lens*, lentil; *gerere*, to bear.] Furnished with a lens.

**lentiginose** (lēntij'ĭnōs), **lentiginous** (lēntij'ĭnūs) *a.* [L. *lentigo*, freckle.] Freckled; speckled; bearing numerous small dots.

**lento-capillary point**,—point, just above wilting coefficient, at which flow of water towards root hairs is impeded on account of surface tension resistance.

**leotropic**,—laeotropic, *q.v.*

**lepidodendroid** (lēp'idōdĕn'droid) *a.* [Gk. *lepis*, scale; *dendron*, tree; *eidos*, form.] *Pert.* Lepidodendron; having scale-like leaf-scars.

**lepidoid** (lēp'idoid) *a.* [Gk. *lepis*, scale; *eidos*, form.] Resembling a scale or scales.

**lepidomorial**,—*pert.*, or composed of, lepidomoria.

**lepidomorium** (lēp'idōmōr'ĭūm) *n.* [Gk. *lepis*, scale; *morion*, constituent part.] Small scale, or unit of composite scale, with bony base and conical or conoid crown of dentine, containing pulp cavity and sometimes covered with enamel. *Plu.* lepidomoria.

**lepidophyte** (lēp'idōfit) *n.* [Gk. *lepis*, scale; *phyton*, plant.] A fossil plant of fern family.

**lepidopterous** (lēp'idōp'tērūs) *a.* [Gk. *lepis*, scale; *pteron*, wing.] Having wings covered with minute overlapping scales; *pert.* moths, butterflies.

**lepidosteoid** (lēp'idōs'tēoid) *a.* [Gk. *lepis*, scale; *osteon*, bone; *eidos*, form.] *Appl.* a ganoid scale lacking cosmine.

**lepidote** (lēp'idōt) *a.* [Gk. *lepidotos*, scaly.] Covered with minute scales.

**lepidotic** (lēp'idōtĭk) *a.* [Gk. *lepidotos*, scaly.] *Appl.* an acid found in wings of some Lepidoptera.

**lepidotrichia** (lēp'idōtrĭk'ĭā) *n. plu.* [Gk. *lepis*, scale; *thrix*, hair.] The bony actinotrichia of teleosts.

- lepocyte** (lěp'osit) *n.* [Gk. *lepis*, husk; *kytos*, hollow.] A cell with a defining cell-wall, *opp.* gymnocyte.
- lepospondylous** (lěp'ospōn'dilus) *a.* [Gk. *lepis*, husk; *sphondylos*, vertebra.] Having amphicoelous, or hour-glass shaped, vertebrae.
- leptocentric** (lěp'tōsēr'trik) *a.* [Gk. *leptos*, slender; *kentron*, centre.] *Appl.* concentric bundle with central leptome.
- leptocephaloid** (lěp'tōkēf'āloid, -sēf-) *a.* [Gk. *leptos*, slender; *kephale*, head; *eidos*, form.] Resembling or having the shape of eel larvae.
- leptocercal** (lěp'tōsēr'kāl) *a.* [Gk. *leptos*, slender; *kerkos*, tail.] With long slender tapering tail, as some fishes; leptocercous, *appl.* protozoa.
- leptodactylous** (lěp'tōdāk'tilus) *a.* [Gk. *leptos*, slender; *daktylos*, finger.] Having slender digits.
- leptodermatous** (lěp'tōdēr'mātūs) *a.* [Gk. *leptos*, slender; *derma*, skin.] Thin-skinned; *appl.* various thecae; leptodermic, leptodermous.
- leptoid** (lěp'toid) *n.* [Gk. *leptos*, slender; *eidos*, form.] One of the thin-walled cortical cells forming strand projecting into the central cylinder of rhizome in mosses; a tubular cell in stem of certain pteridophytes.
- leptome** (lěp'tōm) *n.* [Gk. *leptos*, slender.] Phloem-like part of vascular tissue of plant stems; leptomes-tome; bast; also leptom.
- leptomeninges** (lěp'tōmēnīn'jēz) *n. plu.* [Gk. *leptos*, slender; *meninx*, membrane.] The pia mater and arachnoid membrane.
- leptonema** (lěp'tōnē'mā) *n.* [Gk. *leptos*, slender; *nema*, thread.] Fine unpaired chromosome thread at leptotene.
- leptophloem** (lěp'tōfō'ēm) *n.* [Gk. *leptos*, slender; *phloios*, smooth bark.] Rudimentary bast tissue.
- leptophyllous** (lěp'tōfil'ūs) *a.* [Gk. *leptos*, slender; *phyllon*, leaf.] With slender leaves; having a small leaf area, under 25 square millimetres.
- leptosoma** (lěp'tōsōm) *a.* [Gk. *leptos*, slender; *soma*, body.] Tall and slender; *opp.* euryosome.
- leptosporangiate** (lěp'tōspōrān'jiāt) *a.* [Gk. *leptos*, slender; *sporos*, seed; *angeion*, vessel.] With sporogenous tissue developing from outer cell of periclinal division. *Opp.* eusporangiate.
- leptostroterate** (lěp'tōstrō'tērāt) *a.* [Gk. *leptos*, slender; *strotos*, covered.] With ambulacral plates narrow and crowded together, as in certain Stellerioidea.
- leptotene** (lěp'tōtēn) *n.* [Gk. *leptos*, slender; *tainia*, band.] Early stage of the prophase of meiosis where chromatin is in form of fine threads.
- leptotrombicula** (lěp'tōtrōmbik'ulā) *n.* [Gk. *leptos*, slender; It. *tromba*, trumpet.] The larval form of a trombicula.
- leptoxylem** (lěp'tōzi'lēm) *n.* [Gk. *leptos*, slender; *xylon*, wood.] Rudimentary wood tissue.
- lepto-zygotene** (lěp'tōzi'gōtēn) *a.* [Gk. *leptos*, slender; *zygon*, yoke; *tainia*, band.] *Appl.* transition stage between leptonema and zygonema.
- leptus** (lěp'tūs) *n.* [Gk. *leptos*, small.] The six-legged larva of mites.
- lethal** (lē'thāl) *a.* [L. *letum*, death.] Causing death; of a parasite, fatal or deadly in relation to a particular host; *appl.* a hereditary factor which so influences development that the individual is rendered non-viable. *n.* A lethal factor.
- lethality** (lē'thāl'iti) *n.* [L. *letum*, death.] The ratio of fatal cases to total number of cases affected by a disease or other harmful agency.
- leuceine** (lū'sēin) *n.* [Gk. *leukos*, white.] An amino-acid formed during decomposition of proteids.
- leucine** (lū'sin) *n.* [Gk. *leukos*, white.] Amino-caproic acid found as a constituent of pancreatic juice and of various tissues and organs, also of some plants; C<sub>6</sub>H<sub>13</sub>O<sub>2</sub>N.
- leucism** (lū'sizm, loo-) *n.* [Gk. *leukos*, white.] The presence of white plumage or pelage in animals with pigmented eyes and skin.

**leucite** (lū'sīt) *n.* [Gk. *leukos*, white.]

A colourless plastid.

**leuco-**,—also *leuko-*.

**leucoblast** (lū'kōblāst, loo-) *n.* [Gk. *leukos*, white; *blastos*, bud.] A colourless blood-corpuscle in development.

**leucocarpous** (lū'kōkār'pūs, loo-) *a.* [Gk. *leukos*, white; *karpos*, fruit.] With the fruit white.

**leucocyan** (lū'kōsī'an, loo-) *n.* [Gk. *leukos*, white; *kyanos*, dark blue.] A pigment found in certain algae.

**leucocyte** (lū'kōsīt, loo-) *n.* [Gk. *leukos*, white; *kytos*, hollow.] An amoebocyte; a colourless blood-corpuscle; leukocyte.

**leucocytogenesis** (lū'kōsī'tōjēn'ēsis, loo-) *n.* [Gk. *leukos*, white; *kytos*, hollow; *genesis*, descent.] Leucocyte formation; leucopoiesis.

**leucophore, leukophore** (lū'kōfōr, loo-) *n.* [Gk. *leukos*, white; *pherein*, to bear.] A yellow-pigment-bearing cell; iridocyte.

**leucoplastids** (lū'kōplās'tidz, loo-) *n. plu.* [Gk. *leukos*, white; *plastos*, formed; *idion*, *dim.*] Colourless plastids from which amylo-, chloro-, and chromoplastids arise.

**leucoplasts** (lū'kōplāsts, loo-) *n. plu.* [Gk. *leukos*, white; *plastos*, formed.] Colourless granules of plant cytoplasm, *opp.* chromoplasts; leucoplastids.

**leucopoiesis** (lū'kōpoi'ēsis, loo-) *n.* [Gk. *leukos*, white; *poiesis*, making.] The formation of white blood corpuscles.

**leucopterin(e)** (lū'kōp'tērīn, loo-) *n.* [Gk. *leukos*, white; *pteron*, wing.] A white wing pigment of certain Lepidoptera;  $C_{19}H_{19}O_{11}N_{18}$ .

**leuko-**,—see *leuco-*.

**levator** (lēvā'tōr) *n.* [L. *levare*, to raise.] A name given to muscles serving to raise an organ or part. *Opp.* depressor.

**levulose**,—laevulose, *q.v.*

**Leydig's cells** [F. *von Leydig*, German anatomist]. Cells in testicular interstitial tissue.

**Leydig's duct**,—the Wolffian duct.

**Leydig's organs**,—minute organs on antennae of arthropods, supposed to be organs of smell.

**liana** (liān'ā), **liane** (liān') *n.* [F. *liane*, from L. *ligare*, to bind.] Any luxuriant woody climbing plant of tropical or semi-tropical forests.

**Lias** (lī'ās) *n.* [*layers*.] Marine and estuarine deposits of Jurassic period, containing remains of cycads, insects, ammonites, saurians, and other fossils.

**liber** (lī'bēr) *n.* [L. *liber*, inner bark.] Inner bark; bast.

**libido** (libi'dō) *n.* [L. *libido*, desire.] Excitation within body associated with instinct; sexual energy; psychic energy; hormone, *q.v.*; élan vital.

**libriform** (lī'brifōrm) *a.* [L. *liber*, inner bark; *forma*, shape.] Resembling bast; *appl.* fibres, woody, later becoming septate.

**lichenism** (lī'kenizm) *n.* [Gk. *leichen*, lichen.] Symbiotic relationship between fungi and algae.

**lichenoid** (lī'kénoid) *a.* [Gk. *leichen*, lichen; *oidos*, form.] Resembling a lichen.

**lichenology** (lī'kēnōl'ōjī) *n.* [Gk. *leichen*, lichen; *logos*, discourse.] The study of lichens.

**Lieberkühn's crypts** [J. N. *Lieberkühn*, German anatomist]. Tubular glands of the small intestine.

**Liebig's law** [J. *von Liebig*, German chemist]. The food element least plentiful in proportion to the requirements of plants limits their growth; law of the minimum, *q.v.*

**lien** (lī'ēn) *n.* [L. *lien*, spleen.] Spleen.

**lienal** (liē'nāl) *a.* [L. *lien*, spleen.] *Pert.* spleen; *appl.* artery, vein, nerve plexus.

**lienculus** (liēn'kulūs) *n.* [*Dim.* of L. *lien*, spleen.] An accessory spleen.

**lienogastric** (liē'nōgās'trik) *a.* [L. *lien*, spleen; *gaster*, stomach.] *Pert.* spleen and stomach; *appl.* artery supplying spleen and parts of stomach and pancreas; *appl.* vein of hepatic portal system.



**lienorenal**,—*see* phrenicolienal.

**life-cycle**,—the various phases through which an individual species passes to maturity.

**ligament** (lig'ämënt) *n.* [L. *ligamentum*, bandage.] A strong fibrous band of tissue connecting two or more moveable bones.

**ligamenta flava**,—yellow elastic ligaments connecting laminae of adjoining vertebrae.

**ligneous** (lig'nëūs) *a.* [L. *lignum*, wood.] Woody; of nature of wood.

**lignescence** (lignēs'ënt) *a.* [L. *lignescere*, to become woody.] Developing the characters of woody tissue.

**lignicolous** (lignik'ölūs) *a.* [L. *lignum*, wood; *colere*, to inhabit.] Growing on or in wood.

**lignification** (lig'nifikā'shūn) *n.* [L. *lignum*, wood; *facere*, to form.] Wood-formation; thickening of plant cell-walls by deposition of lignin.

**lignin** (lig'nīn) *n.* [L. *lignum*, wood.] A complex substance which, associated with cellulose, causes the thickening of plant cell-walls, and so forms wood.

**lignivorous** (ligniv'örūs) *a.* [L. *lignum*, wood; *vorare*, to devour.] Eating wood; *appl.* various insects.

**lignocellulose** (lig'nösēl'ülōs) *n.* [L. *lignum*, wood; *cellula*, little cell.] Essential constituent of woody tissue, lignin and cellulose combined.

**lignose** (lig'nōs) *n.* [L. *lignum*, wood.] A variety of cellulose.

**ligula** (lig'ülä) *n.* [L. *ligula*, little tongue.] A band or taenia of white matter in dorsal wall of fourth ventricle; median structure between labial palps of insects; lobe of parapodium in certain annelids; ligule, *q.v.*; lingula, *q.v.*

**ligulate** (lig'ülät) *a.* [L. *ligula*, little tongue.] Having or *pert.* ligules; strap-shaped, as ray florets of Compositae.

**ligule** (lig'ül) *n.* [L. *ligula*, little tongue.] A membranous out-

growth at junction of blade and leaf-sheath or petiole; small scale on upper surface of leaf-base in Lepidodendreae, Selaginellaceae, and Isoëtes; a tongue-shaped corolla, as of certain florets.

**liguliflorous** (lig'üliflō'rūs) *a.* [L. *ligula*, little tongue; *flos*, flower.] Having ligulate flowers only.

**limacel** (lim'äsēl) *n.* [F., from L. *limax*, slug.] Concealed vestigial shell of slugs.

**limaciform** (līmäs'ifōrm), **limacine** (līm'äsin) *a.* [L. *limax*, slug; *forma*, shape.] Like a slug; slug-shaped.

**limb** (lim) *n.* [A.S. *lim*, limb.] Branch: arm; leg; wing; expanded portion of unguiculate petal.

**limbic** (lim'bik) *a.* [L. *limbus*, border.] Bordering; *appl.* a cerebral lobe, including hippocampal and cingulate gyri.

**limbous** (lim'būs) *a.* [L. *limbus*, border.] *Appl.* overlapping sutures.

**limbus** (lim'būs) *n.* [L. *limbus*, border.] Any border if distinctly marked off by colour or structure.

**limen** (līm'ēn) *n.* [L. *limen*, threshold.] Threshold, minimum stimulus, or quantitative difference in stimulation, that is perceptible; boundary, as between vestibule of nostril and nasal cavity, limen nasi.

**limicolous** (limik'ölūs) *a.* [L. *limus*, mud; *colere*, to dwell.] Living in mud.

**liminal** (līm'īnäl) *a.* [L. *limen*, threshold.] *Pert.* a threshold; *appl.* stimulus; *appl.* sensation.

**limited**,—*appl.* chromosomes in germinal, not in somatic, nuclei.

**limivorous** (limiv'örūs) *a.* [L. *limus*, mud; *vorare*, to devour.] Mud-eating; *appl.* certain aquatic animals which swallow mud.

**limnetic** (limnēt'ik) *a.* [Gk. *limne*, marsh.] Living in, or *pert.*, marshes or lakes.

**limnocytophyte** (līm'nōkrīp'tōfit) *n.* [Gk. *limne*, marsh; *kryptos*, hidden; *phyton*, plant.] A helophyte or marsh plant; limnophyte.

**limnology** (limnōl oī) *n.* [Gk. *limne*, marshy lake; *logos*, discourse.] Science dealing with biological and other phenomena *pert.* inland waters; the study of standing waters.

**limnophilous** (limnōf'ilūs) *a.* [Gk. *limne*, marsh; *philein*, to love.] Living in fresh-water marshes; also limnobiatic.

**limnophyte** (lim'nōfit) *n.* [Gk. *limne*, marshy lake; *phyton*, plant.] A pond plant; a helophyte.

**limnoplankton** (lim'nōplāng'ktōn) *n.* [Gk. *limne*, marshy lake; *planktos*, wandering.] The floating animal and plant life in fresh-water lakes, ponds, and marshes. *Opp.* haloplankton.

**limosphere** (li'mōsfēr) *n.* [Gk. *limen*, receptacle; *sphaira*, globe.] A spherical body containing a vacuole, situated near blepharoplast in spermiogenesis of some mosses.

**linea** (lin'ēā) *n.* [L. *linea*, line.] A line-like structure or mark.

**linear** (lin'ēār) *a.* [L. *linea*, line.] *Pert.* or in a line; tape- or thread-like; asthenic, *appl.* constitutional type.

**linear-ensate**,—between linear and ensiform in shape.

**linear - lanceolate**,—between linear and lanceolate in shape.

**linear-oblong**, between linear and oblong in shape.

**linellae** (linēl'ē) *n. plu.* [L. *linella*, fine thread.] A system of filaments in certain Sarcodina holding together the xenophya.

**lineolate** (lin'ēōlāt) *a.* [L. *linea*, line.] Marked by fine lines or striae.

**lingua** (ling'gwā) *n.* [L. *lingua*, tongue.] The floor of mouth in mites; hypopharynx of insects; a tongue, or tongue-like structure.

**lingual** (ling'gwāl) *a.* [L. *lingua*, tongue.] *Pert.* tongue; *appl.* artery, gyrus, nerve, vein, etc.; *appl.* radula of molluscs.

**lingula** (ling'gūlā) *n.* [L. *lingula*, little tongue.] A small tongue-like process of bone or other tissue, as of cerebellum or sphenoid;

a genus of brachiopods; ligula, *q.v.*

**lingulate**, -ligulate. *q.v.*

**linin** (lin'nin) *n.* [L. *linum*, flax.]

The substance of achromatic or oxyphilic reticulum of cell-nucleus.

**lininoplast** (lin'inōplāst) *n.* [L. *linum*, flax; Gk. *plastos*, moulded.] Plasmosome, *q.v.*

**linkage** (ling'kēj) *n.* [A.S. *hlince*, link.] Tendency of certain hereditary factors to remain associated through several generations; gametic coupling.

**Linnaean** (linē'ān) *a.* [C. Linné or Linnaeus, Swedish naturalist.] *Pert.* or designating the system of classification established by Linnaeus.

**linneon** (linē'ōn) *n.* [C. Linné, Swedish naturalist.] Linnaean or taxonomic species.

**lipase** (lip'ās) *n.* [Gk. *lipos*, fat.] A lipolytic or fat-splitting enzyme, found in blood and in various plant and animal organs, and in various seeds.

**lip-cell**,—a sporangium cell at the point of dehiscence.

**lipides** (lip'idz) *n. plu.* [Gk. *lipos*, fat.] Heterogeneous compounds soluble in fats and their solvents, including fats, waxes, chromolipides, sterols, glycolipides, phospholipides; lipids; *cf.* lipoids.

**lipines** (lip'inz) *n. plu.* [Gk. *lipos*, fat.] Compound lipides, including phospholipides and cerebrosides; lipins.

**lipochondria** (lip'ōkōn'driā) *n. plu.* [Gk. *lipos*, fat; *chondros*, grain.] Lipoid granules in the Golgi zone; Golgi presubstance.

**lipochrin** (lipō'krin) *a.* [Gk. *lipos*, fat; *ochros*, sallow.] *Appl.* yellow lipoid droplet, fading by light, in unpigmented base of retinal cell.

**lipochromes** (lip'ōkrōmz) *n. plu.* [Gk. *lipos*, fat; *chroma*, colour.] A more or less indefinite group of plant and animal pigments, as carotins, luteins, chlorophane, rhodophane, xanthophane, zoonerythrin, etc.

**lipoclastic** (lip'oklās'tik) *a.* [Gk. *lipos*, fat; *klastos*, broken.] Fat-splitting; lipolytic; *appl.* enzymes.

**lipogastry** (lip'pōgās'tri) *n.* [Gk. *leipesthai*, to be lacking; *gaster*, stomach.] Temporary obliteration of gastral cavity, as in some sponges.

**lipogenous** (lipōj'ēnūs) *a.* [Gk. *lipos*, fat; *genos*, birth.] Fat-producing.

**lipohumour** (lip'ohū'mōr) *n.* [Gk. *lipos*, fat; *L. humor*, moisture.] A fat-soluble substance produced by nerves and acting on chromatophores.

**lipoid** (lip'oid) *a.* [Gk. *lipos*, fat; *eidos*, form.] Resembling a fatty substance. *n.* A lipide; one of various fat-soluble substances occurring in plants and animals, as a sterol, carotene, terpene.

**lipolytic** (lip'olit'ik) *a.* [Gk. *lipos*, fat; *lyein*, to dissolve.] Capable of dissolving fat; fat-reducing.

**lipomerism** (lipōm'ērīzm) *n.* [Gk. *leipesthai*, to be lacking; *meros*, part.] Suppression of segmentation, or coalescence of segments, as in crustaceans.

**lipopalingenesis** (lip'pōpāl'injēn'esis) *n.* [Gk. *leipesthai*, to be lacking; *palin*, anew; *genesis*, descent.] The omission of some stage or stages in phylogeny.

**lipophore** (lip'ōfūr) *n.* [Gk. *lipos*, fat; *-phoros*, -bearing.] A wandering cell originating in neural crest and containing a lipochrome.

**lipostomy** (lipōs'tōmī) *n.* [Gk. *leipesthai*, to be lacking; *stoma*, mouth.] Temporary obliteration of mouth or osculum.

**lipotropic** (lipōtrōp'ik) *a.* [Gk. *lipos*, fat; *trope*, turn.] Influencing fat metabolism; accelerating removal of fat.

**lipoxenous** (lipōžēn'ūs, lipōk'senūs) *a.* [Gk. *lipein*, to abandon; *xenos*, host.] Leaving the host before completion of development.

**lirella** (lirel'ā) *n.* [L. *lira*, furrow.] A linear apothecium of lichens.

**lissencephalous** (lis'enkef'ālūs, -sēf-) *a.* [Gk. *lissos*, smooth; *engkephalos*,

brain.] Having few or no convolutions of the brain; lissencephalic.

**lissoflagellate** (lis'ōfāj'ēlāt) *a.* [Gk. *lissos*, smooth; *L. flagellum*, whip.] Having no collar surrounding base of flagellum.

**lithite** (lith'it) *n.* [Gk. *lithos*, stone.] A calcareous secretion found in connection with ear, or with otocysts, lithocysts, and tentaculocysts, sensory organs of many invertebrates.

**lithocarp** (lith'okārp) *n.* [Gk. *lithos*, stone; *karpos*, fruit.] Fossil fruit or carpolith.

**lithocysts** (lith'ōsists) *n. plu.* [Gk. *lithos*, stone; *kystis*, bladder.] Minute sacs or grooves, containing lithites, found in various invertebrates; enlarged cells of plant epidermis, in which cystoliths are formed.

**lithodesma** (lith'odēs'mā) *n.* [Gk. *lithos*, stone; *desma*, bond.] A small plate, shelly in nature, found in certain bivalves.

**lithodomous** (lithōd'ōmūs) *a.* [Gk. *lithos*, stone; *demein*, to build.] Living in rock-holes or clefts.

**lithogenous** (lithōj'ēnūs) *a.* [Gk. *lithos*, stone; *-genes*, producing.] Rock-forming, or rock-building, as certain corals.

**lithophagous** (lithōf'āgūs) *a.* [Gk. *lithos*, stone; *phagein*, to eat.] Stone-eating, as birds; rock-burrowing, as some molluscs and sea-urchins.

**lithophilous** (lithōf'ilūs) *a.* [Gk. *lithos*, stone; *philein*, to love.] Growing on stones or rocks; saxicoline.

**lithophyll** (lith'ofil) *n.* [Gk. *lithos*, stone; *phyllon*, leaf.] A fossil leaf, or leaf-impression.

**lithophyte** (lith'ōfit) *n.* [Gk. *lithos*, stone; *phyton*, plant.] Plant growing on rocky ground

**lithosere** (lith'ōsēr) *n.* [Gk. *lithos*, stone; *L. serere*, to put in a row.] A plant succession originating on rock surfaces.

**lithotomous** (lithōt'ōmūs) *a.* [Gk. *lithos*, stone; *temnein*, to cut.] Stone-boring, as certain molluscs.

**litoral** (lit'orál) *a.* [L. *litus*, sea-shore.] Growing or living at or near the sea-shore, *appl.* zone between high and low water marks; also *appl.* cells, fixed macrophages, lining sinuses of reticular tissues and the wall of lymph channels; littoral.

**Littre's glands** [*A. Littre*, French surgeon]. Urethral mucous glands.

**liver** (liv'er) *n.* [A.S. *lifer*, liver.] The bile-secreting gland of vertebrates; digestive gland of some invertebrates.

**liver-pancreas**,—an organ in molluscs and crustaceans, combining functions of liver and pancreas.

**lobar** (lō'bār) *a.* [L.L. *lobus*, lobe.] Of or *pert.* a lobe.

**lobate** (lō'bāt) *a.* [Gk. *lobos*, lobe.] Divided into lobes; lobose.

**lobe** (lōb) *n.* [L.L. *lobus*, from Gk. *lobos*, lobe.] Any rounded projection of an organ; lobus; a flap-like structure on toes of certain birds.

**lobed** (lōbd) *a.* [Gk. *lobos*, lobe.] Having margin cut up into rounded divisions by incisions which reach less than half-way to mid-rib.

**lobopodia** (lōb'ōpō'diā) *n. plu.* [Gk. *lobos*, lobe; *pous*, foot.] Blunt pseudopodia of Protozoa.

**lobose** (lōb'ōs) *a.* [Gk. *lobos*, lobe.] Divided into lobes; lobate.

**lobular** (lōb'ulār) *a.* [Gk. *lobos*, lobe.] Like or *pert.* small lobes.

**lobulate** (lōb'ulāt) *a.* [Gk. *lobos*, lobe.] Divided into small lobes.

**lobule** (lōb'ul) *n.* [*Dim.* of L.L. *lobus*, lobe.] A small lobe or subdivision of a lobe; lobulus.

**lobus** (lō'būs) *n.* [L.L. *lobus*, lobe.] Lobe; portion of an organ, as of glands and brain, delimited by fissures or septa.

**local sign**,—characteristic quality of a tactile or other sensation associated with point of stimulation.

**localisation** (lō'kālīzā'shūn) *n.* [L. *localis*, local.] Determination of a position; restriction to a limited area; restriction of pairing and chiasma formation at pachytene to one part of the chromosome.

**localisation of function**,—reference to different parts of brain as communicating centres of various senses.

**localisation of sensation**,—identification on surface of body of exact spot affected.

**locellus** (lōsēl'ūs) *n.* [L. *locellus* from *locus*, place.] A small compartment of an ovary.

**lociation** (lōsīā'shūn) *n.* [L. *locus*, place.] Local differences in abundance or proportion of dominant species; local faciation.

**locomotor rods**,—hooked or knobbed rods for crawling, on ventral surface of certain Nematoda.

**locular** (lōk'ulār) *a.* [L. *loculus*, little place.] Containing, or composed of loculi; loculate.

**locule**, -loculus.

**loculicidal** (lōk'ulīsi'dāl) *a.* [L. *loculus*, compartment; *caedere*, to cut.] Dehiscent dorsally down middle of carpels.

**loculus** (lōk'ulūs) *n.* [L. *loculus*, compartment.] A small chamber or cavity; cavity of an ovary or of an anther; cavity between septa in certain Coelenterata; chamber of foraminifer shell.

**locus** (lō'kūs) *n.* [L. *locus*, place.] Position of gene in the chromosome; location of a stimulus.

**locusta** (lokūs'tā) *n.* [L. *locusta*, locust.] Spikelet of grasses; a locust.

**lodicule** (lōd'ikūl) *n.* [L. *lodícula*, coverlet.] A scale at base of ovary in grasses, supposed to represent part of a perianth.

**lodix** (lō'diks) *n.* [L. *lodix*, blanket.] A ventral sclerite of seventh abdominal segment, covering genital plate, in Lepidoptera.

**logotype** (lōg'ōtīp) *n.* [Gk. *logos*, word; *typos*, pattern.] A genotype by subsequent designation, not originally described as such.

**loma** (lō'ma) *n.* [Gk. *loma*, hem.] A thin membranous flap forming a fringe round an opening; fringe of toe in birds.

**lomastome** (lō'mästōm) *a.* [Gk. *loma*, hem; *stoma*, mouth.] Having margin of lip recurved or reflected.

**loment**,—lomentum.

**lomentaceous** (lō'mëntā'shūs) *a.* [L. *lomentum*, bean meal.] *Pert.*, resembling, or having lomenta.

**lomentum** (lōmën'tūm) *n.* [L. *lomentum*, bean meal.] A legume or pod constricted between seeds; loment.

**long-day**,—*appl.* plants in which the flowering period is hastened by a relatively long photoperiod, ordinarily more than 12 hours.

**longicorn** (lōn'jīkōrn) *a.* [L. *longus*, long; *cornu*, horn.] Having long antennae; *appl.* certain beetles.

**longipennate** (lōn'jipēn'āt) *a.* [L. *longus*, long; *penna*, wing.] Having long wings, or long feathers.

**longirostral** (lōn'jirōs'trāl) *a.* [L. *longus*, long; *rostrum*, beak.] With a long beak; longirostrate.

**loph** (lōf) *n.* [Gk. *lophos*, crest.] Crest which may connect cones in teeth and so form a ridge.

**lophiostomate** (lōf'fōs'tomāt) *a.* [Gk. *lophion*, small crest; *stoma*, mouth.] With crested conceptacle-opening.

**lophobranchiate** (lōf'ōbrāng'kiāt) *a.* [Gk. *lophos*, crest; *branchia*, gills.] With tufted gills.

**lophocaltrops** (lōf'ōkāl'trōps) *n.* [Gk. *lophos*, crest; A.S. *coltraeppe*, kind of thistle.] A sponge spicule with rays crested or branched.

**lophocercal** (lōf'ōsēr'kāl) *a.* [Gk. *lophos*, crest; *kerkos*, tail.] Having a rayless caudal fin like a ridge round end of vertebral column.

**lophodont** (lōf'ōdōnt) *a.* [Gk. *lophos*, crest; *odous*, tooth.] Having transverse ridges on the cheek-teeth grinding surface.

**lophophore** (lōf'ōfōr) *n.* [Gk. *lophos*, crest; *pherein*, to carry.] A horse-shoe-shaped tentacle-supporting organ in Polyzoa and Brachipoda.

**lophoselenodont** (lōf'ōsēlē'nōdōnt) *a.* [Gk. *lophos*, crest; *selenē*, moon; *odous*, tooth.] Having cheek-teeth ridged with crescentic cuspid ridges on grinding surface.

**lophosteon** (lōfōs'teōn) *n.* [Gk. *lophos*, crest; *osteon*, bone.] The keel-ridge of a sternum.

**lophotriaene** (lōf'ōtrī'ēn) *n.* [Gk. *lophos*, crest; *triaina*, trident.] Lophocaltrops, *q.v.*

**lophotrichous** (lōfōt'rikūs) *a.* [Gk. *lophos*, tuft; *thrix*, hair.] Having long whip-like flagella; with a tuft of flagella at one pole; *appl.* bacteria; lophotrichate, lophotrichic.

**loral** (lō'rāl) *a.* [L. *lorum*, thong.] *Pert.* or situated at the lore.

**lorate** (lō'rāt) *a.* [L. *lorum*, thong.] Strap-shaped.

**lore** (lōr) *n.* [L. *lorum*, thong.] Space between bill and eyes in birds.

**lorica** (lōrī'kā, lōr'ikā) *n.* [L. *lorica*, corselet.] A protective external case found in rotifers, infusorians, and diatoms.

**loricate** (lō'rikāt) *a.* [L. *lorica*, corselet.] Covered with protective shell or scales.

**lorication moment**,—the occasion of deposition of silica or calcium carbonate for an entire skeleton at one time; dictyotic moment.

**lorulum** (lō'rūlūm) *n.* [L. *dim.* of *lorum*, thong.] The small strap-shaped and branched thallus of certain lichens.

**lorum** (lō'rūm) *n.* [L. *lorum*, thong.] The piece of under jaw on which submentum lies in certain insects; dorsal plate protecting pedicle in spiders.

**lotic** (lō'tik) *a.* [L. *lotum*, flowed against.] *Appl.* or *pert.* running water; living in brook or river; *opp.* lentic.

**Louis, angle of** [A. Louis, French surgeon]. Angulus Ludovici or sternal angle.

**loxodont** (lōk'sōdōnt) *a.* [Gk. *loxos*, oblique; *odous*, tooth.] Having molar teeth with shallow grooves between the ridges.

**luciferase** (loos'ifērās) *n.* [L. *lux*, light; *ferre*, to carry.] An oxidising enzyme which acts on luciferin, causing luminescence; photogenin.

- luciferin** (loos'iferin) *n.* [L. *lux*, light; *ferre*, to carry.] Intracellular or extracellular substance oxidised by luciferase, causing luminescence; photopholein.
- lumbar** (lũm'bār) *a.* [L. *lumbus*, loin.] *Pert.* or near the region of the loins; *appl.* artery, vein, vertebrae, plexus, gland.
- lumbocostal** (lũm'bókös'täl) *a.* [L. *lumbus*, loin; *costa*, rib.] *Pert.* loins and ribs; *appl.* arch, ligament.
- lumbosacral** (lũm'bösä'kräl) *a.* [L. *lumbus*, loin; *sacrum*, sacred.] *Pert.* loins and sacrum; *appl.* nerve and trunk, plexus.
- lumbriciform** (lũmbris'ifõrm), **lumbricoid** (lũm'bríkoid) *a.* [L. *lumbricus*, earth-worm; *forma*, shape; Gk. *eidos*, form.] Like a worm.
- lumen** (lũ'mẽn, loo-) *n.* [L. *lumen*, light.] The cavity of a tubular part or organ; central cavity of a plant cell.
- luminescent organs**, -- specialised organs for the production of light, found in various plant and animal organisms.
- lunar** (lũ'nār, loo-) *a.* [L. *luna*, moon.] *Appl.* carpal bone, os lunare or lunatum, also called semilunar and intermedium; lunate.
- lunate** (lũ'nāt, loo-) *a.* [L. *luna*, moon.] Somewhat crescent-shaped, semilunar.
- lunatum**, -- semilunar bone.
- lunette** (lũnět') *n.* [F. *lunettes*, spectacles.] Transparent lower eyelid of snakes.
- lung** (lũng) *n.* [A.S. *lunge*, lung.] The paired or single respiratory organ of air-breathing higher animal forms.
- lung-book**, -- the respiratory organ of Scorpionidae, formed like a purse with numerous compartments.
- lunula** (lũ'nũlä, loo-) *n.* [L. *lunula*, small moon.] Lunule.
- lunular** (lũ'nũlār, loo-) *a.* [L. *lunula*, small moon.] With crescent-shaped marking; lunulate.
- lunule** (lũ'nũl, loo-) *n.* [L. *lunula*, small moon.] A crescent-shaped structure or marking; lunula; small crescentic sclerite, the frontal lunule, above antennal bases in certain Diptera; white opaque portion of nail near root.
- lunulet** (lũ'nũlět, loo-) *n.* [L. *lunula*, small moon.] A small lunule.
- lupulin** (lũ'pũlin, loo'pũlin) *n.* [L. *lupus*, hop.] The resinous glandular scales of hops; an organic compound, bitter and acrid, obtained from these;  $C_{26}H_{38}O_4$ .
- luteal** (lũ'teäl, loo-) *a.* [L. *luteus*, orange-yellow.] *Pert.* or like cells of corpus luteum; *appl.* lutein and paralutein cells; *appl.* hormone: progesterone.
- lutein** (lũ'teın, loo-) *n.* [L. *luteus*, orange-yellow.] The yellow lipochrome pigment of egg-yolk and corpus luteum;  $C_{40}H_{56}O_2$ .
- lutein cells**, -- modified granulosa cells during formation of corpus luteum; follicular lutein cells, *opp.* lutein cells of theca interna.
- luteination** (lũ'teınä'shũn) *n.* [L. *luteus*, orange-yellow.] Corpus luteum formation; luteinisation.
- luteinisation** (lũ'teınizä'shũn, loo-) *n.* [L. *luteus*, orange-yellow.] The formation of corpus luteum.
- luteinising hormone**, -- a pituitary hormone which stimulates theca-lutein cell formation and interstitial cells of testis; LH, prol. B.
- luteosterone**, -- progesterone, progestin.
- luteotrophic** (lũ'teõt'rõf'ik) *a.* [L. *luteus*, orange-yellow; Gk. *trophē*, nourishment.] *Appl.* hormone which assists in maintaining corpus luteum, and may also be lactogenic.
- lychnidiate** (liknıd'ıät) *a.* [Gk. *lychnidion*, small lamp.] Luminous.
- lycopene** (lı'kõpẽn) *n.* [L. *lycopersicon*, tomato, from Gk. *lyko-persikon*.] The red carotenoid pigment of fruits of tomato, rose, etc.; lycopin;  $C_{40}H_{56}$ .
- lygophil** (lı'gõfil) *a.* [Gk. *lyge*, shadow; *philos*, friend.] Preferring shade or darkness

**lymph** (límf) *n.* [L. *lymphā*, water.] An alkaline colourless fluid contained in lymphatic vessels.

**lymph heart**,—contractile expansion of a lymph vessel where it opens into a vein, in many vertebrates.

**lymphatic** (límfat'ík) *a.* [L. *lymphā*, water.] *Pert.* or conveying lymph.

**lymphocyte** (lím'fösít) *n.* [L. *lymphā*, water; Gk. *kytos*, hollow.] A small mononuclear colourless corpuscle of blood and lymph.

**lymphogenic** (lím'fojén'ík) *a.* [L. *lymphā*, water; Gk. *-genes*, producing.] Produced in lymph-glands.

**lymphogenous** (límfoj'énūs) *a.* [L. *lymphā*, water; Gk. *-genes*, producing.] Lymph-forming.

**lymphoid** (lím'foid) *a.* [L. *lymphā*, water; Gk. *eidos*, form.] *Appl.* retiform tissue with meshes largely occupied by lymph corpuscles; adenoid.

**lymphoidocyte** (lím'foidosit) *n.* [L. *lymphā*, water; Gk. *eidos*, form; *kytos*, hollow.] Haemocytoblast.

**lymphomyelocyte** (lím'fomí'elosit) *n.* [L. *lymphā*, water; Gk. *myelos*, marrow; *kytos*, hollow.] Myeloblast.

**lyochromes** (lí'ökrörmz) *n. plu.* [Gk. *lyein*, to loose; *chroma*, colour.] Water-soluble yellow cell pigments, or flavins, including vitamin B<sub>2</sub>.

**lyocytosis** (lí'ösitō'sis) *n.* [Gk. *lyein*, to loose; *kytos*, hollow.] Histolysis by extra-cellular digestion, as in insect metamorphosis.

**Lyonnet's glands**,—paired accessory silk glands in lepidopterous larvae; Filippi's glands.

**lyophil** (lí'öfil) *a.* [Gk. *lyein*, to loose; *philos*, loving.] *Appl.* solutions which, after evaporation to dryness, go readily into solution again on addition of fluid; *cf.* lyophobic.

**lyophobic** (lí'öföb) *a.* [Gk. *lyein*, to loose; *phobos*, fear.] *Appl.* solutions which, after evaporation to dryness, remain as a solid; *cf.* lyophil.

**lyotropic** (liötöröp'ík) *a.* [Gk. *lyein*, to loose; *trope*, turn.] *Appl.* solutions which are dependent on changes in the solvent itself.

**lyra** (lí'rā) *n.* [Gk. *lyra*, lyre.] Triangular lamina or psalterium joining lateral parts of fornix, marked with fibres as a lyre; a lyrate pattern as on some bones; a series of chitinous rods forming part of the stridulating organ in certain spiders.

**lyrate** (lí'rāt) *a.* [Gk. *lyra*, lyre.] Lyre-shaped; *appl.* certain leaves.

**lyriform** (lí'riförm) *a.* [L. *lyra*, lyre; *forma*, shape.] Lyre-shaped; *appl.* a sensory organ, the lyra, in spiders.

**lysactinic** (lisäktín'ík) *a.* [Gk. *lysis*, loosing; *aktis*, ray.] Of Stellerioidea, having podia limited to lower half of body instead of continued to apical plates; *cf.* desmactinic.

**lysigenous** (lisij'énūs) *a.* [Gk. *lysis*, loosing; *-genes*, producing.] *Appl.* formation of tissue cavities caused by degeneration and breaking down of cell-walls in centre of mass.

**lysin** (lí'sín) *n.* [Gk. *lysis*, loosing.] Any substance capable of causing dissolution or lysis of cells or bacteria.

**lysine** (lí'sēn) *n.* [Gk. *lysis*, loosing.] A diamino-acid, constituent of some plant proteins, a dietary factor, and cleavage product of certain animal proteins; C<sub>6</sub>H<sub>14</sub>O<sub>2</sub>N<sub>2</sub>.

**lysogenesis** (lí'sojén'esis) *n.* [Gk. *lysis*, loosing; *genesis*, descent.] The action of lysins.

**lysogenous**,—lysigenous.

**lytta** (lit'ā) *n.* [Gk. *lytta*, madness.] A vermiform structure of muscle, fatty and connective tissue, or cartilage, under the tongue of mammals; lyssa or rabies; cantharis, a blister-beetle.

## M

**macerate** (mäs'ērāt) *v.* [L. *macerare*, to soften.] To wear away or to isolate parts of a tissue or organ; to soften and wear away by digestion or other means.

**machopolyp** (măk'öpöl'ip) *n.* [Gk. *mache*, fight; *polys*, many; *pous*, foot.] A nematophore, of certain Hydromedusae, provided with cnidoblasts or adhesive globules.

**macrandrous** (măkrăn'drūs) *a.* [Gk. *makros*, large; *aner*, man.] Having large male plants or elements.

**macraner** (măkrā'nēr) *n.* [Gk. *makros*, large; *aner*, male.] Male ant of unusually large size.

**macrergate** (măkrēr'gāt) *n.* [Gk. *makros*, large; *ergates*, worker.] Worker ant of unusually large size.

**macro-**,—also see mega-

**macrobiotic** (măk'rōbiōt'ik) *a.* [Gk. *makros*, long; *bios*, life.] Long-lived; life-prolonging.

**macroblast** (măk'rōblāst) *n.* [Gk. *makros*, large; *blastos*, bud.] A large cell or corpuscle; a young normoblast.

**macrocarpous** (măk'rōkār'pūs) *a.* [Gk. *makros*, large; *karpos*, fruit.] Producing large fruit.

**macrocephalous** (măk'rōkēf'ālūs, -sēf-) *a.* [Gk. *makros*, large; *kephale*, head.] Having the cotyledons thickened; big-headed

**macrocnemic** (măk'rōknē'mik) *a.* [Gk. *makros*, large; *kneme*, tibia.] *Appl.* Zoanthidae having the sixth protocneme or primary pair of mesenteries perfect.

**macroconidium** (măk'rōkōnīd'ium) *n.* [Gk. *makros*, large; *konis*, dust; *idion*, *dim.*] A large asexual spore or conidium.

**macroconjugant** (măk'rōkōn'joog-ānt) *n.* [Gk. *makros*, large; *L. conjugare*, to unite.] The larger individual of a conjugating pair.

**macrocyst** (măk'rōsist) *n.* [Gk. *makros*, large; *kystis*, bladder.] A large reproductive cell of certain fungi; a large cyst or case, as for spores.

**macrocystase** (măk'rōsī'tās) *n.* [Gk. *makros*, large; *kytos*, hollow.] The enzyme of macrophages or endothelial cells.

**macroclaylous** (măk'rōdāk'tilūs) *a.* [Gk. *makros*, long; *daktylos*, finger.] With long digits.

**macrodont** (măk'rōdōnt) *a.* [Gk. *makros*, large; *odous*, tooth.] With large teeth.

**macroevolution** (măk'rōēvōlū'shūn) *n.* [Gk. *makros*, large; *L. evolvere*, to unroll.] Evolutionary processes extending through geological eras; large-scale evolution of new genera and species owing to mutations resulting in marked changes in chromosome pattern and reaction system. *Opp.* microevolution.

**macrogamete** (măk'rōgamēt') *n.* [Gk. *makros*, large; *gametes*, spouse.] The larger of two conjugants, usually considered as equivalent to ovum or female conjugant.

**macrogametocyte** (măk'rōgāmē'tō-sīt) *n.* [Gk. *makros*, large; *gametes*, spouse; *kytos*, hollow.] The mother-cell of a macrogamete, considered female; term used mainly in connection with Protista.

**macrogamy** (măkrōg'āmī) *n.* [Gk. *makros*, large; *gamos*, marriage.] Syngamy between full-grown individuals of a species, as in Actinophrys; hologamy.

**macroglia** (măkrōglī'ā) *n. plu.* [Gk. *makros*, large; *glia*, glue.] Astrocytes or true neuroglia; astroglia and oligodendroglia.

**macroGLOSSATE** (măk'rōglōs'āt) *a.* [Gk. *makros*, large; *glossa*, tongue.] Furnished with a large tongue.

**macrognathic** (măk'rōnāth'ik) *a.* [Gk. *makros*, large; *gnathos*, jaw.] Having specially developed jaws.

**macrogonidium** (măk'rōgōnīd'ium) *n.* [Gk. *makros*, large; *gone*, generation; *idion*, *dim.*] A large gonidium.

**macrogyne** (măk'rōjīnē) *n.* [Gk. *makros*, large; *gyne*, woman.] Female ant of unusually large size.

**macroleucocyte** (măk'rōlū'kōsīt, -loo-) *n.* [Gk. *makros*, large; *leukos*, white; *kytos*, hollow.] A chromophil leucocyte, developed from a proleucocyte.

**macromere** (măk'rōmēr) *n.* [Gk. *makros*, large; *meros*, part.] In cleavage of telolecithal eggs, a larger cell of lower hemisphere.



**macromerozoite** (măk'rômêrôzô'it) *n.* [Gk. *makros*, large ; *meros*, part ; *zoon*, animal.] One of many divisions produced by macroschizont stage of Sporozoa.

**macromesentery** (măk'rômês'entêri. -mêz-) *n.* [Gk. *makros*, large ; *mesos*, middle ; *enteron*, gut.] One of the larger complete mesenteries of Anthozoa.

**macromitosome** (măk'romî'tôsôm) *n.* [Gk. *makros*, large ; *mitos*, thread ; *soma*, body.] The paranucleus, as in Lepidoptera.

**macromutation** (măk'rômûtă'shûn) *n.* [Gk. *makros*, large ; *mutare*, to change.] Simultaneous mutation of a number of different characters.

**macromylon** (măk'romî'elôn) *n.* [Gk. *makros*, long ; *myelos*, marrow.] The medulla oblongata.

**macronotal** (măk'ronô'tâl) *a.* [Gk. *makros*, large ; *noton*, back.] With large thorax, as a queen ant.

**macront** (măk'rônt) *n.* [Gk. *makros*, large ; *on*, being.] The larger of two sets of cells formed after schizogony in Neosporidia, the macront giving rise to macrogametes.

**macronucleocyte** (măk'rônû'kleosit) *n.* [Gk. *makros*, large ; *L. nucleus*, kernel ; Gk. *kytos*, hollow.] A leucocyte having a relatively large nucleus ; chromophil leucocyte of insects.

**macronucleus** (măk'rônû'klêus) *n.* [Gk. *makros*, large ; *L. nucleus*, kernel.] The larger of two nuclei in a cell, usually supposed to be of a vegetative or somatic nature ; meganucleus.

**macrophage** (măk'rôfaj) *n.* [Gk. *makros*, large ; *phagein*, to eat.] A large phagocytic cell, fixed or wandering ; a large mononuclear leucocyte ; a histiocyte, clasmato-cyte, pericyte, etc.

**macrophagous** (măkrôf'ăgûs) *a.* [Gk. *makros*, large ; *phagein*, to eat.] Feeding on relatively large masses of food ; *opp.* microphagous.

**macrophyllous** (măk'rofîl'ûs) *a.* [Gk. *makros*, large ; *phyllon*, leaf.] Having large leaves or leaflets.

**macropodous** (măkrôp'ôdûs) *a.* [Gk. *makros*, long ; *pous*, foot.] Having a long stalk, as a leaf or leaflet ; having hypocotyl large in proportion to rest of embryo ; long-footed.

**macropterous** (măkrôptêrûs) *a.* [Gk. *makros*, large ; *pteron*, wing.] With unusually large fins or wings ; fully winged, *opp.* brachypterous.

**macropyrenic** (măk'ropîrê'nik) *a.* [Gk. *makros*, large ; *pyren*, fruit stone.] With nuclei markedly larger than average for the species or other group. *n.* A macropyrenic individual.

**macroschizogony** (măk'rôskîzôg'-ôni) *n.* [Gk. *makros*, large ; *schizein*, to cleave ; *gone*, generation.] Method of multiplication of macroschizonts ; schizogony giving rise to large merozoites.

**macroschizont** (măk'rôskîz'ônt) *n.* [Gk. *makros*, large ; *schizein*, to cleave ; *on*, being.] Stage in life-cycle of certain Haemosporidia developed from sporozoites, and giving rise to macromerozoites.

**macroscleireids** (măk'rôsklê'reîdz) *n. plu.* [Gk. *makros*, large ; *skleros*, hard ; *eidos*, form.] Relatively large columnar sclereids, as in coat of certain seeds.

**macroscopic** (măk'rôskôp'îk) *a.* [Gk. *makros*, large ; *skopein*, to view.] Visible by the naked eye.

**macrosepalous** (măk'rôsêp'ălûs) *a.* [Gk. *makros*, large ; *F. sépale*, sepal.] With specially large sepals.

**macroseptum** (măk'rôsêp'tûm) *n.* [Gk. *makros*, large ; *L. septum*, inclosure.] A primary or perfect septum of Anthozoa.

**macrosiphon** (măkrôsî'fôn) *n.* [Gk. *makros*, large ; *siphon*, tube.] Large internal siphon of certain cephalopods.

**macrosmatic** (măk'rôsmăt'îk) *a.* [Gk. *makros*, large ; *osme*, smell.] With well-developed sense of smell.

**macrosomatous** (măk'rôsô'mâtûs) *a.* [Gk. *makros*, large ; *soma*, body.] Possessing abnormally large body.

**macrosome** (māk'rōsōm) *n.* [Gk. *makros*, large; *soma*, body.] A large alveolar sphere or granule in protoplasm.

**macrospalanchic** (māk'rōsplāngk'-nik) *a.* [Gk. *makros*, large; *splangchnon*, entrail.] Large-bodied and short-legged.

**macrosporangiophore** (māk'rōspōr-ān'jiōfōr) *n.* [Gk. *makros*, large; *sporos*, seed; *angeion*, vessel; *pherein*, to bear.] A structure bearing a macrosporangium.

**macrosporangium** (māk'rōspōrān'-jiūm) *n.* [Gk. *makros*, large; *sporos*, seed; *angeion*, vessel.] A sporangium developing macrospores or megaspores.

**macrospore** (māk'rōspōr) *n.* [Gk. *makros*, large; *sporos*, seed.] A large anisospore or gamete of Sarcodina; a larger spore of heterosporous plants; embryo-sac; megaspore.

**macrosporophore** (māk'rōspō'rōfōr) *n.* [Gk. *makros*, large; *sporos*, seed; *pherein*, to bear.] A leafy lobe developing macrosporangia.

**macrosporophyll** (māk'rōspō'rōfil) *n.* [Gk. *makros*, large; *sporos*, seed; *phyllon*, leaf.] Macrosporophore; carpel.

**macrosporozyte** (māk'rōspōr'ōzō'it) *n.* [Gk. *makros*, large; *sporos*, seed; *zoon*, animal.] A larger endogamous sporozoite of Sporozoa.

**macrostomatous** (māk'rōstōm'ātūs) *a.* [Gk. *makros*, large; *stoma*, mouth.] With very large mouth.

**macrostylospore** (māk'rōstī'lōspōr) *n.* [Gk. *makros*, large; *stylos*, pillar; *sporos*, seed.] A large spore-like stalked body.

**macrostylous** (māk'rōstī'lūs) *a.* [Gk. *makros*, long; *stylos*, pillar.] With long styles.

**macrotherm** (māk'rōthērm) *n.* [Gk. *makros*, large; *therme*, heat.] A tropical plant; macrothermophyte, megatherm.

**macrotyous** (māk'rō'tūs) *a.* [Gk. *makros*, large; *ous*, ear.] With large ears.

**macrotrichia** (māk'rōtrik'iā) *n. plu.* [Gk. *makros*, large; *thrix*, hair.] The larger setae on body or wings of insects.

**macrotype** (māk'rōtip) *n.* [Gk. *makros*, large; *typos*, a type.] A modified arrangement of mesenteries containing more macromesenteries than normal microtype, in Anthozoa.

**macrozoogonidium** (māk'rōzō'ōgōn-id'iūm) *n.* [Gk. *makros*, large; *zoon*, animal; *gone*, generation; *idion*, dim.] A large zoogonidium.

**macrozoospore** (māk'rōzō'ōspōr) *n.* [Gk. *makros*, large; *zoon*, animal; *sporos*, seed.] Large motile spore.

**macruric** (mākroor'ik) *a.* [Gk. *makros*, long; *oura*, tail.] Long-tailed; macrural, macrurous.

**macula** (māk'ulā) *n.* [L. *macula*, spot.] A spot or patch of colour; a small pit or depression; a tubercle.

**macula cribrosa**,—area on wall of vestibule of ear, perforated for passage of auditory nerve filaments.

**macula germinativa**,—the germinal spot, nucleolus of an ovum.

**macula lutea**,—yellow spot of retina, an oval yellowish area in centre of posterior part of retina at point of most perfect vision.

**macular** (māk'ulār) *a.* [L. *macula*, spot.] *Pert.* a macula; *pert.* macula lutea.

**maculate** (māk'ulāt), **maculiferous** (māk'ulif'ērūs), **maculose** (māk'ulōs) *a.* [L. *macula*, spot.] Spotted.

**maculation** (māk'ulā'shūn) *n.* [L. *maculare*, to spot.] The arrangement of spots on a plant or animal.

**madrepore** (mād'rēpōr) *n.* [F. *madrēpore*—from L. *mater*, mother; Gk. *poros*, friable stone.] A branching stony coral; plate at external opening of stone canal in echinoderms.

**madreporic** (mād'rēpōr'ik) *a.* [F. *madrēpore*, madreporite.] *Pert.* a madreporite or madreporite; *appl.* body, plate, tubercle, canal.

**madreporic canal**—stone canal, *q.v.*

**madreporite** (mădrĕp'ōrit) *n.* [*F. madre-pore*, madreporé.] A flat circular or pentagonal grooved, perforated plate at end of an interambulacral area, or between two such areas in Echinoidea, or between rays in Asteroidea; a modified genital plate.

**Magendie's foramen** [*F. Magendie*, French physiologist]. Median aperture in roof of fourth ventricle, connecting the latter with subarachnoid cavities.

**maggot** (măg'ōt) *n.* [*M.E. magot*, grub.] The worm-like insect larva, without appendages or distinct head, as that of the blow-fly.

**maiosis**,—meiosis, *q.v.*

**mala** (mā'lā) *n.* [*L. mala*, cheek.] Part of maxilla of some insects. of mandible of certain myriopods; part of exterior of lower jaw of birds; cheek; malar bone.

**malacoid** (māl'ākoid) *a.* [*Gk. malakos*, soft; *eidōs*, form.] Soft in texture.

**malacology** (māl'ākōl'ōji) *n.* [*Gk. malakos*, soft; *logos*, discourse.] The study of molluscs.

**malacophilous** (māl'ākōf'ilūs) *a.* [*Gk. malakos*, soft; *philein*, to love.] Pollinated by agency of gastropods.

**malacopterous** (māl'ākōp'tērūs) *a.* [*Gk. malakos*, soft; *pteron*, wing.] Soft-finned.

**malacostracous** (māl'ākōs'trākūs) *a.* [*Gk. malakos*, soft; *ostrakon*, shell.] Soft-shelled.

**malar** (mā'lār) *a.* [*L. mala*, cheek-bone.] *Pert.* or in region of cheek. *n.* The jugal or zygomatic bone.

**malaxation** (mālāksā'shūn) *n.* [*Gk. malassein*, to soften.] Compression of mandibles, or chewing, as by wasps.

**male** (māl) *a.* [*L. mas*, male.] *Pert.* masculine organism; *appl.* organs of reproduction, as testes, or stamens; symbol ♂.

**male pronucleus**,—nucleus of spermatozoon.

**malleate** (māl'ēāt) *a.* [*L. malleus*, hammer.] Hammer-shaped; *appl.* a type of trophi of rotifer gizzard.

**malleoincudal** (māl'eōinkū'dāl) *a.* [*L. malleus*, hammer; *incus*, anvil.] *Pert.* malleus and incus of ear.

**malleolar** (mālē'ōlār) *n.* [*L. dim. of malleus*, hammer.] The vestigial fibula of ruminants. *a. Pert.* or in region of malleolus; *appl.* arteries, folds, sulcus.

**malleolus** (mālē'olūs) *n.* [*L. dim. of malleus*, hammer.] Medial and lateral malleolus, lower extremity prolongations of tibia and fibula respectively; one of the club- or racket-shaped appendages on basal segments of hind legs of Solpugida.

**malleoramate** (māl'eōrāmāt) *a.* [*L. malleus*, hammer; *ramus*, branch.] *Appl.* type of trophi with looped manubrium and toothed incus in rotifer gizzard.

**malleus** (māl'eūs) *n.* [*L. malleus*, hammer.] A part of rotifer mastax or gizzard; one of the chain of auditory ossicles of mammals; one of the Weberian ossicles of fishes.

**mallochorion** (māl'ōkōr'ion) *n.* [*Gk. mallos*, wool; *chorion*, skin.] The primitive mammalian chorion.

**malloplacenta** (māl'ōplāsēn'ta) *n.* [*Gk. mallos*, wool; *L. placenta*, flat cake.] Non-deciduate placenta with villi evenly distributed, as in cetaceans and some ungulates.

**Malpighian** (mālpig'iān) *n.* [*M. Malpighi*, Italian anatomist]. Disc-covered by or named after Malpighi.

**Malpighian body**, or **corpuscle**,—in spleen, a nodular mass of lymphoid tissue ensheathing the smaller arteries; in kidney, a glomerulus of convoluted capillary blood-vessels enclosed in a dilatation of uriniferous tubule.

**Malpighian layer**,—basal layer of epidermis next to true skin; rete Malpighii.

**Malpighian tubules**,—thread-like excretory tubes leading into posterior part of gut of insects.

**maltase** (mōl'tās) *n.* [*A.S. mealt*, malt.] An enzyme which converts malt-sugar into grape-sugar.

**maltose** (mòl'tōs) *n.* [A.S. *mealt*, malt.] Malt-sugar, formed from starch by *ptyalin* and *amylase*;  $C_{12}H_{22}O_{11}$ .

**melon** (mām'ēlōn) *n.* [F. *mamelon*, from L. *mamilla*, nipple.] Small pimple-like structure in centre of tubercle of echinoid interambulacral plate; papilla forming nucellus in cycads.

**mamilla** (māmil'ā) *n.* [L. *mamilla*, nipple.] A nipple; a nipple-shaped structure; mammilla.

**mamillary bodies**,—corpora mamillaria or albicantia, *q.v.*

**mamillary process or tubercle**,—superior tubercle connected with transverse process of lower thoracic vertebrae.

**mamillate** (mām'ilāt) *a.* [L. *mamilla*, nipple.] Studded with small protuberances.

**mamma** (mām'ā) *n.* [L. *mamma*, breast.] Milk-secreting organ of female mammals.

**mammal** (mām'al) *n.* [L. *mamma*, breast.] An animal of a class of vertebrates of which the females suckle the young.

**mammalogy** (māmāl'ōjī) *n.* [L. *mamma*, breast; Gk. *logos*, discourse.] The study of mammals.

**mammary** (mām'ārī) *a.* [L. *mamma*, breast.] *Pert.* the breast; *appl.* arteries, veins, glands, tubules, etc.

**mammiferous** (māmif'ērūs) *a.* [L. *mamma*, breast; *ferre*, to bear.] Developing mammae; milk-secreting; mammalian.

**mamilla**,—mamilla, *q.v.*

**mammogenic** (mām'ōjēn'īk) *a.* [L. *mamma*, breast; Gk. *gennaein*, to produce.] *Appl.* pituitary hormone complex which promotes growth of the lobe-alveolar and duct systems of the mammary gland.

**manchette** (mānshēt') *n.* [F. *manchette*, cuff.] Membrane enveloping the cytoplasm surrounding the axial filament of a spermatid.

**mandible** (mān'dibl) *n.* [L. *mandibulum*, jaw.] The lower jaw of vertebrates, either a single bone or composed of several; a paired

mouth appendage of arthropods; mandibulum.

**mandibular** (māndib'ulār) *a.* [L. *mandibulum*, jaw.] *Pert.* the lower jaw; *appl.* arch, canal, foramen, fossa, nerve, notch.

**mandibulate** (māndib'ulāt) *a.* [L. *mandibulum*, jaw.] Having a lower jaw; having functional jaws; having mandibles.

**mandibuliform** (māndib'ulifōrm) *a.* [L. *mandibulum*, jaw; *forma*, shape.] Resembling, or used as a mandible; *appl.* certain insect maxillae.

**mandibulohyoid** (māndib'ulōhī'oid) *a.* [L. *mandibulum*, jaw; Gk. *hyoeides*, T-shaped.] In region of mandible and hyoid.

**mandibulomaxillary** (māndib'ulō-māksil'ārī) *a.* [L. *mandibulum*, jaw; *maxilla*, jaw.] *Pert.* maxillae and mandibles of arthropods.

**manducation** (mān'dūkā'shūn) *n.* [L. *manducare*, to chew.] Chewing; mastication.

**manicate** (mān'īkāt) *a.* [L. *manicatus*, sleeved.] Covered with entangled hairs or matted scales.

**manna** (mān'ā) *n.* [Gk. *manna*, manna.] Hardened exudation of bark of certain trees; honey-dew secreted by certain Coccidae.

**mannose** (mān'ōs) *n.* [Gk. *manna*, manna.] A sugar of various plants;  $C_6H_{12}O_6$ .

**manoxylic** (mānōzī'lik) *a.* [Gk. *manos*, slack; *xylon*, wood.] Having soft loose wood, as Cycadales. *Opp.* pycnoxylic.

**mantle** (mān'tl) *n.* [L. *mantellum*, cloak.] Outer soft fold of integument next shell of molluscs; pallium; sheath of spongioblast cells; body-wall of ascidians; scapulars and wing coverts of birds; ocrea, *q.v.*

**mantle cavity**,—a space between the mantle and body proper.

**mantle cell**,—a cell of tapetum or investing tissue of a sporangium.

**mantle fibres**,—the spindle-fibres of a fully formed spindle.

**mantle layer**,—a layer of embryonic medulla spinalis representing the future gray columns.

**mantle lobes**,—dorsal and ventral flaps of mantle in bivalves.

**manual** (măn'ûâl) *n.* [L. *manus*, hand.] A wing-quill borne on manus of birds; remex primarius, primary feather.

**manubrial** (mănū'brîâl) *a.* [L. *manubrium*, handle.] *Pert.* a manubrium; handle-shaped.

**manubrium** (mănū'brîüm) *n.* [L. *manubrium*, handle.] A cell projecting inwards from shield of an antheridial globule of thallophytes; a hypostome or conical elevation at distal end of a hydrozoan polyp; clapper-like portion hanging down from under surface of medusae; handle-like part of malleus of ear; handle of malleus of mastax; presternum or anterior part of sternum.

**manus** (măn'üs) *n.* [L. *manus*, hand.] Hand, or part of fore-limb corresponding to it, as found in vertebrates from Amphibia onwards.

**manyplies**,—omasum or psalterium, third chamber of stomach of ruminants—so-called from its folded structure.

**marcescent** (mărsēs'ënt) *a.* [L. *marcescere*, to wither.] Withering but not falling off; *appl.* a calyx or corolla persisting after fertilisation.

**marginal** (măr'jinâl) *a.* [L. *margo*, edge.] *Pert.* at or near the margin, edge, or border; *appl.* a form of nervation; *appl.* a convolution of frontal lobe; *appl.* a type of placenta; *appl.* plates round margin of chelonian carapace.

**marginalia** (măr'jină'liă) *n. plu.* [L. *margo*, edge.] Prostalia or defensive spicules on body surface round osculum.

**marginate** (măr'jinât) *a.* [L. *margo*, edge.] Having a distinct margin in structure or colouring.

**marginicidal** (măr'jinisī'dâl) *a.* [L. *margo*, edge; *caedere*, to cut.] Dehiscing by line of union of carapels.

**marginiform** (măr'jinifôrm) *a.* [L. *margo*, edge; *forma*, shape.] Like a margin or border in appearance or structure.

**marginirostral** (măr'jinirôs'trâl) *a.* [L. *margo*, edge; *rostrum*, beak.] Forming the edges of a bird's bill.

**marita** (mări'tă, marē'tă) *n.* [L. *maritus*, conjugal.] Sexually mature stage in helminth life history.

**marital** (măr'itâl) *a.* [L. *maritus*, conjugal.] *Pert.* marita; producing fertilised eggs, *appl.* trematodes.

**marker**,—an identifying factor; a gene of known location and effect which makes possible the determination of the distribution of other, less conspicuously effective, genes.

**marmorate** (măr'mörât) *a.* [L. *marmor*, marble.] Of marbled appearance.

**marrow** (măr'ō) *n.* [A.S. *mearg*, pith.] Connective tissue filling up cylindrical cavities in bodies of long bones, and spaces of cancellous tissue, differing in composition in different bones; medulla ossium; pith of certain plants; vegetable marrow.

**marsupial** (mărsū'piäl) *a.* [L. *marsupium*, pouch.] *Pert.* a marsupium; pouch-bearing, as a kangaroo; *appl.* bones of pelvic girdle in certain mammals.

**marsupium** (mărsū'piüm) *n.* [L. *marsupium*, pouch.] Any pouch-like structure in which the young of an animal complete their development, such as abdominal pouch of marsupials; gill cavities of bivalves; recess formed by diverging spines and a supporting membrane in stelleroids; structure protecting the acrocyt in Sertularia; a nursing-sac surrounding certain archegonia.

**mask** (măsk) *n.* [F. *masque*, mask.] A hinged prehensile structure, corresponding to adult labium, peculiar to dragon-fly nymph.

**masked** (măs'kd) *a.* [F. *masque*, mask.] Personate, *appl.* corolla; concealed, *appl.* fat of cell which is not evident microscopically.

**massa intermedia**,—grey matter connecting thalami across third ventricle; middle commissure.

**masseter** (mās'ētēr) *n.* [Gk. *maseter*, one that chews.] Muscle which raises lower jaw and assists in chewing.

**masseteric** (mās'ētēr'ik) *a.* [Gk. *masseter*, one that chews.] *Pert.* or near masseter muscle of cheek; *appl.* artery, vein, nerve.

**massive** (mās'iv) *a.* [L. *massa*, mass.] Bulky; heavy; compacted; *appl.* nuclei deficient in nuclear sap.

**massula** (mās'ulā) *n.* [L. *massula*, small mass.] A mass of microspores in a sporangium of certain pteridophytes; a massed group of microspores in orchids.

**mast cells**,—spheroid or ovoid cells of very granular protoplasm, numerous in connective tissue where fat is being laid down; Mastzellen of Ehrlich.

**mastax** (mās'tāks) *n.* [Gk. *mastax*, jaws.] The gizzard or pharyngeal mill of rotifers.

**mastication** (mās'tikā'shūn) *n.* [L. *masticare*, to chew.] Process of chewing food with teeth till reduced to small pieces or to a pulp.

**masticatory stomach**,—the gastric mill or stomodaeal apparatus of crustaceans, for grinding and straining food material.

**mastidion** (māstid'ion) *n.* [Gk. *mastos*, breast; *idion*, *dim.*] Nipple-like protuberance on paturon, in some spiders.

**mastigium** (māstij'iūm) *n.* [Gk. *mastigion*, little whip.] Defensive posterior lash of certain larvae.

**mastigobranchia** (mās'tigōbrāng'klā) *n.* [Gk. *mastix*, whip; *branchia*, gills.] Epipodite of adult Decapoda, a bilobed membranous lamina extending upwards between gills.

**mastigosome** (māsti'gösōm') *n.* [Gk. *mastix*, whip; *soma*, body.] A blepharoplast.

**mastoid** (mās'toid) *a.* [Gk. *mastos*, breast; *eidos*, form.] Nipple-shaped; *appl.* a process of temporal

bone, cells, foramen, fossa, notch.

**mastoidesquamous** (māstoid'ēō-skwā'mūs) *a.* [Gk. *mastos*, breast; *eidos*, like; L. *squama*, scale.] *Pert.* mastoid and squamous parts of temporal bone.

**mastoidohumeralis** (māstoid'ōhū-mērā'lis) *a.* [Gk. *mastos*, breast; *eidos*, like; L. *humerus*, humerus.] A muscle of certain quadrupeds connecting mastoid and humerus.

**masto-occipital** (mās'tō-ōksip'itāl) *a.* [Gk. *mastos*, breast; L. *occiput*, occiput.] *Pert.* occipital bone and mastoid process of temporal.

**mastoparietal** (mās'tōpāri'ētāl) *a.* [Gk. *mastos*, breast; L. *paries*, wall.] *Pert.* parietal bone and mastoid process of temporal.

**mastotympanic** (mās'tōtimpān'ik) *a.* [Gk. *mastos*, breast; *tympanon*, drum.] *Appl.* part of tympanic cavity's boundary in certain reptiles.

**mating types**,—groups, the individuals of which do not conjugate with individuals of other groups, as of ciliates.

**matriclinous** (māt'rikli'nūs) *a.* [L. *mater*, mother; Gk. *klinein*, to bend.] With hereditary characteristics more maternal than paternal; matroclonic; matroclinal.

**matrix** (māt'riks) *n.* [L. *mater*, mother.] Ground substance of connective tissue; part beneath body and root of nail; uterus; body upon which lichen or fungus grows; envelope of chromatid.

**matroclinal**,—matriclinous, *q.v.*

**mattula** (māt'ulā) *n.* [L. *matia*, mat.] Fibrous network covering petiole bases of palms.

**maturation** (māt'ūrā'shūn) *n.* [L. *maturus*, ripe.] Ripening; completion of germ-cell development, consisting of reduction of chromatin; meiosis; reduction of chromosomes from somatic or diploid to genetic or haploid number.

**Mauthner's cells** [L. *Mauthner*, Austrian physician]. A layer be-

- tween medullary sheath and neurolemma of nerve fibre.
- maxilla** (mäksil'ä) *n.* [L. *maxilla*, jaw.] The upper jaw; part of upper jaw behind premaxilla; an appendage of most arthropods, posterior to mandible, modified in various ways in adaptation to function and requirements.
- maxillary** (mäksil'äri) *a.* [L. *maxilla*, jaw.] *Pert.* or in region of maxilla or upper jaw; *appl.* artery, nerve, process, sinus, tuberosity, vein, etc.
- maxillary glands**, — paired renal organs opening at base of maxilla in Crustacea.
- maxilliferous** (mäk'silif'erüs) *a.* [L. *maxilla*, jaw; *ferre*, to carry.] Bearing maxillae.
- maxilliform** (mäksil'iförm) *a.* [L. *maxilla*, jaw; *forma*, shape.] Like a maxilla.
- maxillipede** (mäksil'ipéd) *n.* [L. *maxilla*, jaw; *pes*, foot.] An appendage, in one, two, or three pairs, posterior to maxillae in arthropods; also maxilliped.
- maxillo dental** (mäksil'óden'täl) *a.* [L. *maxilla*, jaw; *dens*, tooth.] *Pert.* jaws and teeth.
- maxillojugal** (mäksil'ojoo'gäl) *a.* [L. *maxilla*, jaw; *jugum*, yoke.] *Pert.* jaw and jugal bone.
- maxillolabial** (mäksil'ölä'biäl) *a.* [L. *maxilla*, jaw; *labium*, lip.] *Pert.* maxilla and labium; *appl.* dart in ticks.
- maxillomandibular** (mäksil'ömändib'ülär) *a.* [L. *maxilla*, jaw; *mandibulum*, jaw.] *Appl.* arch forming jaws of primitive fishes; *pert.* maxilla and mandible.
- maxillopalatal** (mäksil'öpäl'ätäl) *a.* [L. *maxilla*, jaw; *palatus*, palate.] *Pert.* jaw and palatal bones; *appl.* a maxillary process of birds.
- maxillopharyngeal** (mäksil'öfärin'jäl) *a.* [L. *maxilla*, jaw; Gk. *pharyngx*, gullet.] *Pert.* lower jaw and pharynx.
- maxillopremaxillary** (mäksil'öprë-mäksil'äri) *a.* [L. *maxilla*, jaw; *pre*, before.] *Pert.* whole of upper jaw; *appl.* jaw when maxilla and premaxilla are fused.
- maxilloturbinal** (mäksil'ötür'binal) *a.* [L. *maxilla*, jaw; *turbo*, whorl.] *Pert.* maxilla and turbinals. *n.* A bone arising from lateral wall of nasal cavity, which supports sensory epithelium.
- maxillula** (mäksil'ülä) *n.* [L. *dim.* of *maxilla*, jaw.] A first maxilla in Crustacea when there are more pairs than one; an appendage between mandible and first maxilla in primitive insects.
- mazic** (mä'zik) *a.* [Gk. *maza*, cake.] Placental; *pert.* placenta.
- M-chromosome**, — a microchromosome; or, a mediocentric chromosome.
- M-disc**, — a line in middle of Hensen's line, *q.v.*
- meatus** (mēä'tüs) *n.* [L. *meatus*, passage.] A passage or channel, as acoustic, nasal, etc.
- mechanism** (mek'änizm) *n.* [Gk. *mechane*, machine.] The view that all vital phenomena are due to physical and chemical laws.
- mechanocyte** (mek'änösit) *n.* [Gk. *mechane*, contrivance; *kytos*, hollow.] A cell derived from bone, cartilage, connective tissue, tendon, or muscle; a supporting cell; a fibrocyte.
- mechanoreceptor** (mek'änörēsēp'tör) *n.* [Gk. *mechane*, contrivance; L. *recipere*, to receive.] A specialised structure sensitive to contact, pressure, or gravity.
- Meckel's cartilage** or **rod** [*J. F. Meckel*, junior, German anatomist]. The lower jaw of lower vertebrates, and in higher vertebrates, the axis round which membrane bones of jaw are arranged and formed.
- Meckel's ganglion** [*J. F. Meckel*, senior, German anatomist]. The sphenopalatine ganglion.
- meconidium** (mē'kōnid'ium) *n.* [Gk. *mekon*, poppy; *idion*, *dim.*] Sessile or pedicellate extracapsular medusa usually lying on top of gonangium of certain hydroids.

**meconium** (mēkō'nīūm) *n.* [Gk. *mekon*, poppy.] Waste products of a pupa or other embryonic form; contents of intestine of new-born mammal.

**media** (mē'diā) *n.* [L. *medius*, middle.] A middle structure, such as a layer of tissue, a central nervure; *plu.* of medium, substances of various kinds in which cultures are grown; transmitting substances.

**mediad** (mē'diād) *adv.* [L. *medius*, middle; *ad*, to.] Towards but not quite in the middle line or axis.

**medial** (mē'diāl) *a.* [L. *medius*, middle.] Situated in the middle.

**median** (mē'diān) *a.* [L. *medius*, middle.] Lying or running in axial plane; intermediate; middle. *n.* The middle variate when variates are arranged in order of magnitude.

**mediastinal** (mē'diāstī'nāl) *a.* [L. *mediastinus*, servant.] *Pert.* or in region of mediastinum; *appl.* cavity, arteries, glands, pleura.

**mediastinum** (mē'diāstī'nūm) *n.* [L. *mediastinus*, servant.] Space between right and left pleura in and near median sagittal thoracic plane; incomplete vertical septum of testis, Highmore's body.

**mediator** (mē'diātōr) *n.* [L. *medius*, middle.] A nerve cell maintaining relation between receptor and effector.

**mediocentric** (mē'diōsēn'trīk) *a.* [L. *medius*, middle; *centrum*, centre.] Having a medial, or mediad, centromere; *appl.* chromosome.

**mediodorsal** (mē'diōdōr'sāl) *a.* [L. *medius*, middle; *dorsum*, back.] In the dorsal middle line.

**mediopalatine** (mē'diōpāl'ātin) *a.* [L. *medius*, middle; *palatus*, palate.] Between palatal bones; *appl.* a cranial bone of some birds.

**mediopectoral** (mē'diōpēk'tōrāl) *a.* [L. *medius*, middle; *pectus*, breast.] *Appl.* middle part of sternum.

**mediostapedial** (mē'diōstāpē'diāl) *n.* [L. *medius*, middle; *stapes*, stirrup.] *Pert.* that portion of columella auris external to stapes.

**mediotarsal** (mē'diōtār'sāl) *a.* [L. *medius*, middle; *tarsus*, ankle.] Between tarsal bones.

**medioventral** (mē'diōvēn'trāl) *a.* [L. *medius*, middle; *venter*, belly.] In the middle ventral line.

**mediproboscis** (mē'diprōbōs'is) *n.* [L. *medius*, middle; Gk. *proboskis*, trunk.] Middle portion of insect proboscis, part of ligula.

**medithorax** (mē'dithō'rāks) *n.* [L. *medius*, middle; Gk. *thorax*, breast.] The middle part of thorax; the mesothorax of insects.

**medium** (mē'diūm) *n.* [L. *medium*, middle.] Any of the structures through which a force acts, as refracting media of eyebulb; substance in which cultures are reared or tissues propagated.

**medulla** (mēdūl'ā) *n.* [L. *medulla*, marrow, pith.] Marrow of bones; central part of an organ or tissue; pith or central portion of stem.

**medulla oblongata**, — posterior portion of brain continuous with medulla spinalis or spinal cord.

**medullary** (mēdūl'āri) *a.* [L. *medulla*, pith.] *Pert.* or in region of medulla; *appl.* axis, artery, lamina, membrane, bone, spaces, canal, etc.

**medullary canal**, — hollow cylindrical portion of a long bone containing marrow; the neurocoel; neural tube.

**medullary groove**, — a groove on surface of medullary plate, bounded by folds which grow and coalesce, converting groove into a canal, the neurocoel.

**medullary keel**, — a downward growth towards archenteron, the rudiment of central nervous system in development of certain primitive vertebrates.

**medullary layer**, — a thick sub-cortical layer of the thallus of some lichens.

**medullary phloem**, — internal phloem in a bicollateral bundle, as in Cucurbitaceae.

**medullary plate**, — plate-like formation of ectoderm cells bordering blastopore of early embryo; neural



- plate, earliest rudiment of nervous system.
- medullary rays**—a number of strands of connective tissue extending between pith and pericycle.
- medullary sheath**,—a ring of protoxylem round pith of certain stems; a layer of white substance, composed of myelin, surrounding axis cylinder of medullated nerve-fibre.
- medullary velum**,—valve of Vieussens, *q.v.*
- medullated** (mĕd'ulātĕd) *a.* [L. *medulla*, pith.] Provided with pith, or with a medullary sheath.
- medullated nerve-fibres**,—fibres of brain and spinal cord, consisting of axis-cylinder or neuraxis of primitive fibrillae, surrounded by medullary sheath, in turn covered by delicate neurilemma.
- medullispinal** (mĕd'ul'ispī'nāl) *a.* [L. *medulla*, pith; *spina*, spine.] Of the spinal cord.
- medusa** (mĕd'ūsā) *n.* [Gk. *Medousa*, one who rules.] A jelly-fish.
- medusiform** (mĕd'ūsifōrm) *a.* [Gk. *Medousa*, Medusa; L. *forma*, shape.] Like a medusa or jelly-fish.
- medusoid** (mĕd'ūsoid) *n.* [Gk. *Medousa*, Medusa; *eidōs*, like.] A medusa-like free-swimming gonophore of Hydrozoa. *a.* Like a jelly-fish or medusa.
- medusome** (mĕd'ūsōm) *n.* [Gk. *Medousa*, Medusa; *soma*, body.] Medusoid stage in life-history of Obelia.
- mega**,—also see macro.
- megacephalic** (mĕg'ākĕfāl'ik, -sĕf-) *a.* [Gk. *megas*, large; *kēphalē*, head.] With abnormally large head; having a cranial capacity of over 1450 c.c.; *cf.* mesocephalic, microcephalic.
- megagamete** (mĕg'āgāmĕt') *n.* [Gk. *megas*, large; *gametes*, spouse.] A rounded cell regarded as an ovum or its equivalent, developed from a megagametocyte after a process akin to maturation; macrogamete.
- megagametocyte** (mĕg'āgāmĕtōsīt) *n.* [Gk. *megas*, large; *gametes*,

- spouse; *kytos*, hollow.] A cell developed from a merozoite, and itself giving rise to a megagamete.
- megagametogenesis** (mĕg'āgāmĕtōjĕn'ĕsis) *n.* [Gk. *megas*, great; *gametes*, spouse; *genesis*, descent.] Development of megagametes or ova.
- megakaryocyte** (mĕg'ākār'īōsīt) *n.* [Gk. *megas*, large; *karyon*, nut; *kytos*, hollow.] An amoeboid giant cell of bone-marrow, with one large annular lobulated nucleus, containing a number of nucleoli.
- megalæsthetes** (mĕg'ālĕsthĕt'ĕz) *n. plu.* [Gk. *megalos*, great; *aisthetes*, perceiver.] Sensory organs, sometimes in form of eyes, in Placophora.
- megalecithal**,—see megalolecithal.
- megaloblast** (mĕg'ālōblāst) *n.* [Gk. *megalos*, greatly; *blastos*, bud.] A primitive large erythroblast.
- megalogonidium** (mĕg'ālōgōnīd'ium) *n.* [Gk. *megalos*, greatly; *gonos*, offspring; *idion*, *dim.*] A large gonidium.
- megalolecithal** (mĕg'ālōlĕs'ithāl) *a.* [Gk. *megalos*, greatly; *lekithos*, yolk.] Containing much yolk, as telolecithal eggs; megalecithal.
- megalopic** (mĕg'ālōp'ik) *a.* [Gk. *megalos*, greatly; *ops*, eye.] Belonging to the megalops stage.
- megalopore** (mĕg'ālōpōr) *n.* [Gk. *megalos*, great; *poros*, channel.] Pore in dorsal plates of Chiton, for placing a megalæsthete in direct communication with exterior.
- megalops** (mĕg'ālōps) *n.* [Gk. *megalos*, greatly; *ops*, eye.] A larval stage of certain Crustacea, as crabs, conspicuous by large stalked eyes; megalopa.
- megalospheric** (mĕg'ālōsfēr'ik) *a.* [Gk. *megalos*, greatly; *sphaira*, globe.] Of polythalamous foraminiferous shells, having a megalosphere or large initial chamber; megaspheric.
- megamere** (mĕg'āmēr) *n.* [Gk. *megas*, large; *meros*, part.] One of the large cells formed after primary divisions of a developing ovum.

**megameric** (mĕg'āmĕr'ik) *a.* [Gk. *megas*, large; *meros*, part.] With relatively large parts; *appl.* chromosomes with large heterochromatic regions; *pert.* megameres.

**meganephridia** (mĕg'ānĕfrīd'ia) *n. plu.* [Gk. *megas*, large; *nephros*, kidney; *idion*, *dim.*] Large nephridia, occurring as one pair per segment; holonephridia.

**meganucleus** (mĕg'ānū'klĕūs) *n.* [Gk. *megas*, large; *L. nucleus*, kernel.] The larger or vegetative nucleus of infusoria; macronucleus; trophonucleus.

**megaphanerophyte** (mĕg'āfān'ērō-fit) *n.* [Gk. *megas*, large; *phaneros*, manifest; *phyton*, plant.] Tree exceeding 30 metres in height.

**megaphyllous** (mĕg'āfil'ūs) *a.* [Gk. *megas*, large; *phyllon*, leaf.] Having relatively large leaves.

**megasclere** (mĕg'āsklĕr) *n.* [Gk. *megas*, large; *skleros*, hard.] Skeletal spicule of general supporting framework of sponges. *Opp.* microsclere.

**megasome**,—macrosome, *q.v.*

**megasorus** (mĕg'āsō'rūs) *n.* [Gk. *mega*, large; *soros*, heap.] A sorus containing megasporangia, *opp.* microsorus.

**megasporangium** (mĕg'āspōrān'-jiūm) *n.* [Gk. *megas*, large; *sporos*, seed; *angeion*, vessel.] A macrosore-producing sporangium; ovule.

**megaspore** (mĕg'āspōr) *n.* [Gk. *megas*, great; *sporos*, seed.] A larger-sized spore of dimorphic forms in reproduction by spore-formation; larger spore of heterosporous plants, regarded as female; gynospore; embryo-sac cell of seed plant macrosore.

**megasporocyte** (mĕg'āspō'rōsīt) *n.* [Gk. *megas*, large; *sporos*, seed; *kytos*, hollow.] The embryo-sac mother-cell, diploid cell in ovary that undergoes meiosis, producing four haploid megaspores.

**megasporophyll** (mĕg'āspō'rōfil) *n.* [Gk. *megas*, great; *sporos*, seed; *phyllon*, leaf.] A spore-bearing

leaf developing megasporangia; carpel.

**megatherm** (mĕg'āthĕrm) *n.* [Gk. *megas*, great; *therme*, heat.] A tropical plant; a plant requiring moist heat.

**megazoid** (mĕg'āzō'oid) *n.* [Gk. *megas*, great; *zoon*, animal; *eidos*, form.] The larger zoid resulting from binary or other fission.

**megazoospore** (mĕg'āzō'ōspōr) *n.* [Gk. *megas*, great; *zoon*, animal; *sporos*, seed.] A large zoospore, as in reproduction of certain Radiolaria; a zoogonidium of certain Algae.

**megistotherm** (mĕj'istōthĕrm, mĕg-) *n.* [Gk. *megistos*, greatest; *therme*, heat.] A plant that thrives at a more or less uniformly high temperature.

**Mehlis' glands**,—acinous glands surrounding the ootype; shell gland of trematodes.

**Meibomian glands** [*H. Meibom*, German anatomist]. The tarsal glands, modified sebaceous glands of the eyelids, the ducts opening on the free margins.

**meiocyte** (mi'ōsīt) *n.* [Gk. *meion*, smaller; *kytos*, hollow.] A reproductive cell prior to meiosis; auxocyte, *q.v.*

**meiogenic** (mi'ōjĕn'ik) *a.* [Gk. *meion*, smaller; *gene*, descent.] Promoting nuclear division.

**meiolecithal** (mi'ōlĕs'ithāl) *a.* [Gk. *meion*, less; *lekithos*, yolk.] Having little yolk, as homolecithal and isolecithal eggs.

**meiomery** (miōm'ĕri) *n.* [Gk. *meion*, smaller; *meros*, part.] Condition of having fewer than the normal number of parts.

**meiophylly** (mi'ōfil'i) *n.* [Gk. *meion*, smaller; *phyllon*, leaf.] Suppression of one or more leaves in a whorl.

**meiosis** (miō'sis) *n.* [Gk. *meion*, smaller.] Process of reduction division of germ-cell chromosomes from diploid to haploid number at maturation; also maiosis.

**meiostemonous** (mi'ōstĕm'ōnūs) *a.* [Gk. *meion*, smaller; *stemon*, spun thread.] Having fewer stamens than petals or sepals.

**meiotaxy** (mī'ōtāk'si) *n.* [Gk. *meion*, smaller; *taxis*, arrangement.] Suppression of whorl or set of organs.

**meiotic** (mīōt'ik) *a.* [Gk. *meion*, smaller.] *Appl.* reduction division, *pert.* meiosis.

**Meissner's corpuscles** [*G. Meissner*, German histologist]. Tactile corpuscles, associated with sense of pain, in skin of digits, lips, nipple, and certain other areas.

**Meissner's plexus**, a gangliated plexus of nerve fibres in submucous coat of small intestine.

**melanin** (mēl'ānīn) *n.* [Gk. *melas*, black.] Black or dark-brown pigment; *cf.* eumelanin, pheomelanin, dopa, haemozoin;  $C_{77}H_{98}O_{33}N_{14}S$ .

**melaniridosome** (mēl'ānīr'idōsōm) *n.* [Gk. *melas*, black; *iris*, rainbow; *soma*, body.] A pigment body consisting of a melanophore and associated iridocytes in corium of fishes.

**melanism** (mēl'ānīzm) *n.* [Gk. *melas*, black.] Excessive development of black pigment.

**melanoblast** (mēl'ānōblāst) *n.* [Gk. *melas*, black; *blastos*, bud.] A cell of rete mucosum giving rise to melanin formation in the Malpighian layer of epidermis.

**melanocyte** (mēl'ānōsīt) *n.* [Gk. *melas*, black; *kytos*, hollow.] A black pigmented lymphocyte.

**melanophore** (mēl'ānōfōr) *n.* [Gk. *melas*, black; *pherein*, to bear.] A black pigment cell.

**melanosoma** (mēl'ānōsō'mā) *n.* [Gk. *melas*, black; *soma*, body.] Dark, pigment mass associated with ocellus, as in certain Dinoflagellata.

**melanospermous** (mēl'ānōspēr'mūs) *a.* [Gk. *melas*, black; *sperma*, seed.] *Appl.* seaweeds with dark-coloured spores.

**melanotic** (mēl'ānōt'ik) *a.* [Gk. *melas*, black.] Having black pigment unusually developed.

**meliphagous** (mēlīf'āgūs) *a.* [Gk. *meli*, honey; *phagein*, to eat.] Feeding on honey; mellivorous.

**melliferous** (mēlīf'ērūs) *a.* [L. *mel*,

honey; *ferre*, to carry.] Honey-producing.

**mellisugent** (mēl'isū'jent) *a.* [L. *mel*, honey; *sugere*, to suck.] Honey-sucking.

**mellivorous** (mēlīv'örūs) *a.* [L. *mel*, honey; *vorare*, to devour.] Honey-eating; meliphagous.

**member** (mēm'bēr) *n.* [L. *membrum*, member.] A limb or organ of the body; a well-defined part or organ of a plant.

**membrana** (mēmbrā'nā) *n.* [L. *membrana*, membrane.] A thin film, skin, or layer of tissue covering a part of animal or plant; a thin covering of cells or of unicellular organisms; a membrane.

**membranaceous** (mēm'brānā'shūs) *a.* [L. *membrana*, membrane.] Of the consistency, or having the structure, of a membrane.

**membrane bone**,—a bone developing directly in membrane without passing through a cartilage stage.

**membranella** (mēm'brānēl'ā) *n.* [L. *membrana*, membrane.] An undulating membrane formed by fusion of rows of cilia, in some protozoa; ciliated band, in tornaria.

**membraniferous** (mēm'brānīf'ērūs) *a.* [L. *membrana*, membrane; *ferre*, to carry.] Enveloped in or bearing a membrane.

**membranoid** (mēm'brānoid) *a.* [L. *membrana*, membrane; Gk. *eidōs*, form.] Resembling a membrane.

**membranous** (mēm'brānūs) *a.* [L. *membrana*, membrane.] Resembling or consisting of membrane; pliable and semitransparent.

**membranous cranium**,—a mesenchymal investment enclosing brain.

**membranous labyrinth**,—internal ear, separated from bony cavities by perilymph, and itself containing endolymph.

**membranous vertebral column**,—continuous sheath of mesoderm enveloping notochord and neural tube.

**membranula** (mēmbrān'ulā) *n.* [L. *dim.* of *membrana*, membrane.] A concrescence of cilia, as in certain infusoria.

**membranule** (mēm'brānūl) *n.* [L. *dim.* of *membrana*, membrane.] A small opaque space close to body of insect, in anal area of wing of some dragonflies.

**menadione**,—vitamin K, present in green vegetables and other foods, essential to formation of prothrombin.

**menarche** (mēnār'kē) *n.* [Gk. *men*, month; *arche*, beginning.] First menstruation; age at first menstruation.

**Mendelian**,—*pert.* character which behaves according to results of Mendel's law, manifesting allelomorphous inheritance.

**Mendelism**,—a law or rule governing inheritance of characters in plants and animals, discovered by *Gregor Mendel*. This principle deals with inheritance of 'unit characters,' presence or absence of one or other of a pair of contrasting characters, dominant and recessive. It also shows that offspring of organisms with a pair of contrasting characters will exhibit these in a definite ratio, and it is extended to deal with groups of characters.

**meningeal** (mēnīn'jēāl) *a.* [Gk. *meninx*, membrane.] *Pert.* or in region of meninges; *appl.* arteries, veins, nerves, etc.

**meninges** (mēnīn'jēz) *n. plu.* [Gk. *meninx*, membrane.] The three membranes enclosing brain and spinal cord, from without inwards: dura mater, arachnoid, and pia mater.

**meningocyte** (mēning'gōsīt) *n.* [Gk. *meninx*, membrane; *kytos*, hollow.] A phagocytic cell of the subarachnoid space.

**meningosis** (mēn'inggō'sīs) *n.* [Gk. *meninx*, membrane.] Attachment by means of membranes.

**meningospinal** (mēning'gōspī'nāl) *a.* [Gk. *meninx*, membrane; L. *spina*, spine.] *Pert.* spinal cord membranes.

**meninx**,—*sing.* of meninges.

**meniscus** (mēnis'kūs) *n.* [Gk. *meniskos*, small moon.] Interarticular fibro-cartilage found in joints exposed to violent concussion; inter-

vertebral disc; a tactile disc, being terminal expansion of axis cylinder in tactile corpuscles.

**menopause** (mē'nōpōz) *n.* [Gk. *men*, month; *pausi*, ending.] Climacterical cessation of menstruation. *Cf.* climacteric.

**menotaxis** (mēn'ōtāk'sīs) *n.* [Gk. *menein*, to remain; *taxis*, arrangement.] Compensatory movements to maintain a given direction of body axis in relation to sensory stimuli; maintenance of visual axis during locomotion.

**mensa** (mēn'sā) *n.* [L. *mensa*, table.] Chewing surface of tooth.

**menstruation** (mēn'stroōā'shūn) *n.* [L. *mensis*, month; *struere*, to flow.] Periodic discharge from uterus of various vertebrates, chiefly higher mammals.

**mental** (mēn'tāl) *a.* [L. *mentum*, chin.] *Pert.* or in region of chin; *appl.* foramen, nerve, spines, tubercle, muscle; *appl.* scale or plate of fish and of reptile; *pert.* mentum of insects. [L. *mens*, mind.] *Pert.* the mind.

**mentigerous** (mēntij'ērūs) *a.* [L. *mentum*, chin; *gerere*, to carry.] Supporting or bearing the mentum.

**mentomeckelian** (mēn'tomēkē'liān) *a.* [L. *mentum*, chin; J. F. Meckel, junior, German anatomist.] *Appl.* a cartilage bone, present in a few lower vertebrates, at either side of mandibular symphysis.

**mentum** (mēn'tūm) *n.* [L. *mentum*, chin.] The chin; medial part of gnathochilarium in Diplopoda; region of labium between prementum and submentum in insects; projection between head and foot of some gastropods.

**mericarp** (mēr'ikārp) *n.* [Gk. *meros*, part; *karpōs*, fruit.] A one-seeded indehiscent part of a schizocarp, as of a cremocarp.

**mericlinal** (mēr'iklī'nāl) *a.* [Gk. *meros*, part; *klinein*, to bend.] Partly periclinal, *appl.* chimaera with inner tissue of one species only partly surrounded by outer tissue of the other.

- meridional canal**,—in ctenophores, a canal into which adradial canals open.
- meridional furrow**,—a longitudinal furrow extending from pole to pole of a segmenting egg.
- merisis** (mēr'isis) *n.* [Gk. *meris*, division.] Increase in size owing to cell division; *cf.* auxesis.
- merism**,—metamerism, *q.v.*
- merismatic** (mēr'ismāt'ik) *a.* [Gk. *merismos*, partition.] Dividing or separating into cells or segments; meristematic, *q.v.*
- merismoid** (mēr'ismoid) *a.* [Gk. *merismos*, partition; *eidōs*, like.] With branched pileus.
- merispore** (mēr'ispōr) *n.* [Gk. *meris*, part; *sporos*, seed.] A segment or spore of a multicellular spore-body.
- meristele** (mēr'istēlē) *n.* [Gk. *meris*, part; *stēle*, pillar.] A separate part of a monostelic stem passing outwards from stele to leaves; the branch of a stele supplying a leaf.
- meristem** (mēr'istēm) *n.* [Gk. *meristos*, divided.] Tissue formed of cells all capable of diversification, as found at growing points; merismatic or meristematic tissue.
- meristematic** (mēr'istēmāt'ik) *a.* [Gk. *meristos*, divided.] *Pert.* or consisting of meristem; *appl.* tissue, cells of growing point; merismatic.
- meristematic ring**,—tube of meristematic tissue between cortex and pith, subtending the apical meristem and giving rise to vascular tissues.
- meristic** (mēr'is'tik) *a.* [Gk. *meristos*, divided.] Segmented; divided off into parts; differing in number of parts.
- meristic variation**,—changes in number of parts or segments, and in geometrical relations of the parts; *cf.* substantive variation.
- meristogenetic** (mēr'is'tōjēnēt'ik) *a.* [Gk. *meristos*, divided; *genesis*, descent.] Developing from meristem.
- merithallus** (mēr'rithāl'ūs) *n.* [Gk. *meris*, part; *thallos*, young shoot.] A stem unit; an internode.
- Merkel's corpuscle** [F. S. *Merkel*, German anatomist]. A tactile receptor, in skin and in submucosa of mouth.
- mermaid's purse**,—horny, floating or fixed, egg-envelope of elasmobranchs.
- mermithaner** (mēr'mithā'nēr) *n.* [Gk. *mermis*, cord; *aner*, male.] Male ant parasitised by *Mermis*.
- mermithergate** (mēr'mithēr'gāt) *n.* [Gk. *mermis*, cord; *ergates*, worker.] An enlarged worker ant parasitised by *Mermis*.
- mermithogyne** (mērmi'thōj'n'ē) *n.* [Gk. *mermis*, cord; *gyne*, female.] Female ant parasitised by *Mermis*.
- meroandry** (mērōān'drī) *n.* [Gk. *meros*, part; *aner*, male.] The condition of having a reduced number of testes, as a single pair in certain Oligochaeta; *cf.* holandry.
- meroblast** (mēr'ōblāst) *n.* [Gk. *meros*, part; *blastos*, bud.] Intermediate stage between schizont and merozoite in some Sporozoa; a meroblastic ovum.
- meroblastic** (mēr'ōblās'tik) *a.* [Gk. *meros*, part; *blastos*, bud.] *Appl.* ova which undergo only partial segmentation or cleavage in development; developing from part of the oosphere only.
- merocerite** (mērōs'ērīt) *n.* [Gk. *meros*, thigh; *keras*, horn.] The fourth segment of crustacean antennae.
- merocrine** (mēr'ōkrīn) *a.* [Gk. *meros*, part; *krinein*, to separate.] *Appl.* glands in which secreting cells are able to function repeatedly, as sudoriferous and lactiferous glands. (*Opp.* holocrine.)
- merocytes** (mēr'ōsīts) *n. plu.* [Gk. *meros*, part; *kytos*, hollow.] Nuclei formed by repeated division of supernumerary sperm-nuclei, as in egg of selachians, reptiles, and birds; schizonts, *q.v.*
- merogametes** (mēr'ōgāmēts') *n. plu.* [Gk. *meros*, part; *gametes*, spouse.] Protozoan individuals specialised for syngamy; microgametes. (*Opp.* hologametes.)

**merogamy**,—microgamy, *q.v.*

**merogastrula** (mēr'ögās'troolä) *n.* [Gk. *meros*, part; *dim.* of *gaster*, stomach.] The gastrula formed from a meroblastic ovum.

**merogenesis** (mēr'öjēn'ēsis) *n.* [Gk. *meros*, part; *genesis*, descent.] Formation of parts; segmentation.

**merogeny**,—merogony, *q.v.*

**merognathite** (mērögnä'thīt) *n.* [Gk. *meros*, thigh; *gnathos*, jaw.] Fourth segment of crustacean mouth-part.

**merogony** (mērög'onī) *n.* [Gk. *meros*, part; *gone*, generation.] Development of normal young of small size, from part of an egg, in which there was no female pronucleus.

**meroistic** (mēröis'tik) *a.* [Gk. *meros*, part; *oon*, egg.] *Appl.* ovariole containing nutritive or nurse cells; *cf.* acortrophic, polytrophic.

**merokinesis** (mēr'ökinē'sis) *n.* [Gk. *meros*, part; *kinēsis*, movement.] Formation and division of a thread-like chromosome in the karyomeres.

**merome** (mēröm) *n.* [Gk. *meros*, part.] A body segment; somite, metamere.

**meromorphosis** (mēr'omôr'fōsis) *n.* [Gk. *meros*, part; *morphosis*, shaping.] Regeneration of a part with the new part less than that lost.

**meron** (mērön) *n.* [Gk. *meros*, upper thigh.] Posterior portion of coxa of insects; sclerite between middle and hind coxae, or immediately above hind coxa, in Diptera; meso-sternum.

**meronephridia**,—micronephridia.

**meront** (mērönt') *n.* [Gk. *meros*, part; *on*, being.] A uninucleate schizont-stage in Neosporidia, succeeding the planont-stage.

**meroplankton** (mēr'öpläng'ktön) *n.* [Gk. *meros*, part; *plangkton*, wandering.] Plankton living only part-time near the surface; temporary plankton, consisting mainly of eggs and larvae; seasonal plankton.

**meropodite** (mēröpödīt'), **meros** (mērös) *n.* [Gk. *meros*, upper thigh; *pous*, foot.] Fourth seg-

ment of thoracic appendage in crustaceans; femur in spiders.

**merosomatous** (mēr'ösöm'ätüs) *a.* [Gk. *meros*, part; *soma*, body.] *Appl.* ascidiozooids divided into two regions, thorax and abdomen.

**merosome** (mēr'ösöm) *n.* [Gk. *meros*, part; *soma*, body.] A body segment, somite, or metamere.

**merosthenic** (mēr'rösthēn'ik) *a.* [Gk. *meros*, upper thigh; *sthenos*, strength.] With unusually developed hind-limbs.

**merotomy** (mēröt'ömi) *n.* [Gk. *meros*, part; *temnein*, to cut.] Segmentation or division into parts.

**merotype** (mēr'otip) *n.* [Gk. *meros*, part; *typos*, pattern.] Part of the same perennial plant or vegetatively propagated animal from which a holotype was taken.

**merozoite** (mēr'özö'it) *n.* [Gk. *meros*, part; *zoon*, animal.] Division-product of a schizont in Sporozoa.

**merozoon** (mēr'özö'ön) *n.* [Gk. *meros*, part; *zoon*, animal.] A fragment of a unicellular animal containing part of the macronucleus, obtained by artificial division.

**merrythought**,—furcula of birds, formed by coalesced clavicles.

**merus**,—meropodite, *q.v.*

**Méry's glands** [*J. Méry*, French anatomist]. Bulbo-urethral glands, *q.v.*

**mesad**,—mediad, mesiad.

**mesadenia** (mēsädē'niä) *n. plu.* [Gk. *mesos*, middle; *aden*, gland.] Mesodermal accessory genital glands in insects; *cf.* ectadenia.

**mesal**,—medial, mesial.

**mesamoeboïd** (mēs'amē'boid) *a.* [Gk. *mesos*, middle; *amoibe*, change; *eidos*, form.] *Appl.* nucleated cells of blood islands from which blood corpuscles are derived.

**mesanepimeron** (mēsän'ēpimē'rön, mēz-) *n.* [Gk. *mesos*, middle; *ana*, up; *meros*, upper thigh.] Sclerite above epimeron and below wing base, in Diptera.

**mesarch** (mēs'ark) *a.* [Gk. *mesos*, middle; *arche*, beginning.] *Appl.*

xylem having metaxylem developing in all directions from the protoxylem, characteristic of ferns; having the protoxylem surrounded by metaxylem; beginning in a mesic environment, *appl.* seres.

**mesaticephalic** (mēs'atikēfāl'ik, -sēf-) *a.* [Gk. *mesatos*, mid; *kephale*, head.] Having a cephalic index of 75 to 80; mesocephalic.

**mesaxonic** (mēs'aksōn'ik) *a.* [Gk. *mesos*, middle; *axon*, axis.] With the line dividing the foot, passing up the middle digit.

**mesectoderm** (mēsēk'tōdērm) *n.* [Gk. *mesos*, middle; *ektos*, outside; *derma*, skin.] Parenchyma formed of descendants of ectodermal cells which migrated inwards.

**mesembryo** (mēsēm'briō) *n.* [Gk. *mesos*, middle; *embryon*, embryo.] The blastula.

**mesencephalon** (mēs'ēnkēf'ālōn, -sēf-) *n.* [Gk. *mesos*, middle; *en*, in; *kephale*, head.] The mid-brain, comprising corpora quadrigemina (bigemina), cerebral peduncles, and aqueduct of Sylvius.

**mesenchyma** (mēsēng'kīmā), **mesenchyme** (mēsēng'kīm) *n.* [Gk. *mesos*, middle; *engchein*, to pour in.] A mass of tissue, intermediate between ectoderm and endoderm of a gastrula.

**mesendoderm** (mēsēn'dōdērm) *n.* [Gk. *mesos*, middle; *endon*, within; *derma*, skin.] Cells lying posteriorly to lip of blastopore, partly invaginated with endoderm in gastrulation, in development of some molluscs.

**mesenterial** (mēs'entē'riāl, mēz-) *a.* [Gk. *mesos*, middle; *enteron*, gut.] *Pert.* a mesentery; *appl.* filaments of Actinozoa.

**mesenteric** (mēs'entēr'ik) *a.* [Gk. *mesos*, middle; *enteron*, gut.] *Pert.* a mesentery; *appl.* arteries, glands, nerves, veins, etc.

**mesenteriole** (mēs'entē'riōl) *n.* [L. *dim.* of *mesenterium*, mesentery.] A fold of peritoneum derived from mesentery, and retaining vermiform process or appendix in position.

**mesenterium**,—mesentery, *g.v.*

**mesenteron** (mēsēn'tērōn, mēz-) *n.* [Gk. *mesos*, middle; *enteron*, gut.] The main digestive cavity of Actinozoa and other Coelentera; portion of alimentary canal lined by endoderm; mid-gut.

**mesentery** (mēs'entēri, mēz-) *n.* [L. *mesenterium*, mesentery.] A peritoneal fold serving to hold viscera in position; a muscular partition extending inwards from body-wall in coelenterates.

**mesepimeron** (mēs'epimē'rōn, mēz-) *n.* [Gk. *mesos*, middle; *epi*, upon; *meros*, upper thigh.] The epimeron of insect mesothorax; meskat-epimeron in Diptera.

**mesepisternum** (mēs'ēpistēr'nūm) *n.* [Gk. *mesos*, middle; *epi*, upon; *sternon*, breast.] Meso-episternum, sclerite below anterior spiracle in Diptera; mesanepisternum.

**mesethmoid** (mēsēth'moid, mēz-) *a.* [Gk. *mesos*, middle; *ethmos*, sieve; *eidos*, form.] Between the two ectethmoid bones; *appl.* ethmoid plate of cranium when it ossifies; median cranial bone of vertebrates.

**mesiad** (mēz'iād) *adv.* [Gk. *mesos*, middle; L. *ad*, to.] Towards or near the middle plane.

**mesial** (mē'ziāl), **mesian** (mē'ziān) *a.* [Gk. *mesos*, middle.] In the middle vertical or longitudinal plane.

**mesic** (mēs'ik, mē'zik) *a.* [Gk. *mesos*, middle.] Conditioned by temperate moist climate, neither xeric nor hydric.

**mesoarion**,—mesovarium, *g.v.*

**mesobenthos** (mēs'ōbēn'thōs, mēz-) *n.* [Gk. *mesos*, middle; *benthos*, depths.] Animal and plant life of sea-bottom when depth is between 100 and 500 fathoms.

**mesoblast** (mēs'ōblāst, mēz-) *n.* [Gk. *mesos*, middle; *blastos*, bud.] The mesoderm or middle layer of an embryo; mesoblastema

**mesoblastic** (mēs'ōblās'tik, mēz-) *a.* [Gk. *mesos*, middle; *blastos*, bud.] *Pert.* or developing from middle layer of an embryo.

**mesobranchial** (mēs'ōbrāng'kiäl, mēz-) *a.* [Gk. *mesos*, middle; *branchia*, gills.] *Pert.* middle gill-region, as in Crustacea.

**mesobronchus** (mēs'ōbrōng'kūs, mēz-) *n.* [Gk. *mesos*, middle; *brongchos*, windpipe.] In birds, the main trunk of a bronchus giving rise to secondary bronchi.

**mesocaecum** (mēs'ōsē'kūm, mēz-) *n.* [Gk. *mesos*, middle; *L. caecus*, blind.] The mesentery connected with the caecum.

**mesocardium** (mēs'okār'diūm, mēz-) *n.* [Gk. *mesos*, middle; *kardia*, heart.] An embryonic mesentery binding heart to pericardial walls; part of pericardium enclosing veins (venous m.) or aorta (arterial m.); mesocardial ligament or gubernaculum cordis.

**mesocarp** (mēs'ōkārp, mēz-) *n.* [Gk. *mesos*, middle; *karpōs*, fruit.] The middle layer of the pericarp.

**mesocentrous** (mēs'ōsēn'trūs, mēz-) *a.* [Gk. *mesos*, middle; *kentron*, centre.] Ossifying from a median centre.

**mesocephalic** (mēs'ōkēf'ālik, mēz-) *a.* [Gk. *mesos*, middle; *kephale*, head.] Having a cranial capacity of between 1350 and 1450 c.c.; *cf.* megacephalic, microcephalic.

**mesochilium** (mēs'ōkī'liūm, mēz-) *n.* [Gk. *mesos*, middle; *cheilos*, lip.] The middle portion of labellum of orchids.

**mesochiton** (mēs'ōkī'tōn, mēz-) *n.* [Gk. *mesos*, middle; *chiton*, coat.] Middle layer of oogonial wall, between endochiton and exochiton, as in Fucales; mesochite.

**mesocoel** (mēs'ōsēl, mēz-) *n.* [Gk. *mesos*, middle; *koilos*, hollow.] Middle portion of coelomic cavity; the second of three main parts of coelom of molluscs; cavity of mesencephalon, aqueduct of Sylvius or iter.

**mesocolic** (mēs'ōkōl'ik, mēz-) *a.* [Gk. *mesos*, middle; *kolon*, large intestine.] *Pert.* mesocolon; *appl.* lymph glands.

**mesocolon** (mēs'ōkō'lōn, mēz-) *n.*

[Gk. *mesos*, middle; *kolon*, large intestine.] A mesentery or fold of peritoneum attaching colon to dorsal wall of abdomen.

**mesocoracoid** (mēs'ōkōr'ākoid, mēz-) *a.* [Gk. *mesos*, middle; *korax*, crow; *eidos*, form.] Situated between hyper- and hypo-coracoid; *appl.* middle part of coracoid arch of certain fishes.

**mesocotyl** (mēs'ōkōt'il, mēz-) *n.* [Gk. *mesos*, middle; *kōtyle*, cup.] Part of axis between scutellum and coleoptile.

**mesocycle** (mēs'ōsikl, mēz-) *n.* [Gk. *mesos*, middle; *kyklos*, circle.] A layer of tissue between xylem and phloem of a monostelic stem; part of conjunctive tissue of stele.

**mesodaeum** (mēs'ōdē'ūm, mēz-) *n.* [Gk. *mesos*, middle; *odaios*, *pert.* way.] Endodermal part of embryonic digestive tract, between stomodaeum and proctodaeum.

**mesoderm** (mēs'ōdērm, mēz-) *n.* [Gk. *mesos*, middle; *derma*, skin.] The mesoblast or embryonic layer lying between ectoderm and endoderm.

**mesodermal** (mēs'ōdēr'māl, mēz-) *a.* [Gk. *mesos*, middle; *derma*, skin.] *Pert.*, derived, or developing from mesoderm.

**mesodesm** (mēs'ōdēzm, mēz-) *n.* [Gk. *mesos*, middle; *desma*, bond.] Part of mesocycle.

**mesodont** (mēs'ōdōnt, mēz-) *a.* [Gk. *mesos*, middle; *odous*, tooth.] *Appl.* stag-beetles having a medium development of mandible projections.

**mesogaster** (mēs'ōgās'tēr, mēz-) *n.* [Gk. *mesos*, middle; *gaster*, stomach.] The mesentery or fold of peritoneum supporting the stomach.

**mesogastric** (mēs'ōgās'trik, mēz-) *a.* [Gk. *mesos*, middle; *gaster*, stomach.] *Pert.* a mesogaster or mesogastrum, or to middle gastric region.

**mesogastrum** (mēs'ōgās'triūm, mēz-) *n.* [Gk. *mesos*, middle; *gaster*, stomach.] Mesentery connecting stomach with dorsal abdominal wall in embryo; middle abdominal region.



**mesoglia** (mēsōgli'ā, mēz-) *n.* [Gk. *mesos*, middle; *glōia*, glue.] Mesodermal phagocytic interstitial cells of nervous system; of Hortege: microglia; of Robertson: oligodendroglia.

**mesogloea** (mēs'ōglē'ā, mēz-) *n.* [Gk. *mesos*, middle; *glōia*, glue.] An intermediate non-cellular gelatinous layer in sponges and coelenterates.

**mesognathion** (mēs'ōnāth'ion, mēz-) *n.* [Gk. *mesos*, middle; *gnathos*, jaw.] The lateral segment of premaxilla, bearing lateral incisor.

**mesohepar** (mēs'ōhē'pār, mēz-) *n.* [Gk. *mesos*, middle; *hepar*, liver.] Mesentery supporting liver.

**mesohydrophytic** (mēs'ōhī'drofitik, mēz-) *a.* [Gk. *mesos*, middle; *hydor*, water; *phyton*, plant.] Growing in temperate regions but requiring much moisture.

**mesolecithal** (mēs'ōlē'sithāl, mēz-) *a.* [Gk. *mesos*, middle; *lekithos*, yolk.] Having a moderate yolk content; *cf.* centrolecithal.

**mesology** (mēsōl'ōji, mēz-) *n.* [Gk. *mesos*, middle; *logos*, discourse.] The study of relations between organism and environment; bionomics.

**mesome** (mēs'ōm, mēz'ōm) *n.* [Gk. *mesos*, middle.] The axis regarded as a morphological unit of plants.

**mesomere** (mēs'ōmēr, mēz-) *n.* [Gk. *mesos*, middle; *meros*, part.] Middle zone of coelomic pouches in embryo; mesoblastic somite or protovertebra; medial branch of phallic lobe in insects.

**mesometrium** (mēs'ōmē'triūm, mēz-) *n.* [Gk. *mesos*, middle; *metra*, uterus.] The mesentery of uterus and connecting tubes.

**mesomitosis** (mēs'ōmītō'sis, mēz-) *n.* [Gk. *mesos*, middle; *mitos*, thread.] Mitosis within nuclear membrane, without co-operation of cytoplasmic elements; *cf.* metamitosis.

**mesomorphic** (mēs'ōmōr'fik, mēz-) *a.* [Gk. *mesos*, middle; *morphe*, form.] Having form, structure, or size normal or intermediate between extremes; mesoplastic.

**mesomyodian** (mēs'ōmīō'dian, mēz-) *a.* [Gk. *mesos*, middle; *mys*, muscle; *eidōs*, form.] *Appl.* birds with muscles of syrinx attached to middle of bronchial semi-rings.

**meson** (mēs'ōn, mēz'ōn) *n.* [Gk. *mesos*, middle.] The central plane, or region of it.

**mesonephric** (mēs'ōnēf'rik, mēz-) *a.* [Gk. *mesos*, middle; *nephros*, kidney.] *Pert.* mesonephros, or mid-kidney; *appl.* duct, tubules.

**mesonephridium** (mēs'ōnēfrīd'iūm, mēz-) *n.* [Gk. *mesos*, middle; *nephros*, kidney; *idion*, *dim.*] A nephridium or excretory organ of certain invertebrates, derived from mesoblast.

**mesonephros** (mēs'ōnēf'rōs, mēz-) *n.* [Gk. *mesos*, middle; *nephros*, kidney.] Intermediate part of excretory organ in vertebrate embryos; Wolffian body.

**mesonotum** (mēs'ōnō'tūm, mēz-) *n.* [Gk. *mesos*, middle; *noton*, back.] Dorsal part of insect mesothorax.

**mesoparapтерon** (mēs'ōpārāp'tērōn, mēz-) *n.* [Gk. *mesos*, middle; *para*, beside; *pteron*, wing.] A small sclerite of mesothorax of some insects.

**mesopetalum** (mēs'ōpētālūm, mēz-) *n.* [Gk. *mesos*, middle; *petalon*, leaf.] Labellum or lip of an orchid.

**mesophanerophyte** (mēs'ōfān'ērōfit, mēz-) *n.* [Gk. *mesos*, middle; *phaneros*, manifest; *phyton*, plant.] Tree from 8 to 30 metres in height.

**mesophil** (mēs'ōfil, mēz-) *a.* [Gk. *mesos*, middle; *philein*, to love.] Thriving at moderate temperatures, at between 20° and 40° C. when *appl.* bacteria; mesophilic; mesic, *q.v.* *n.* Mesophile.

**mesophloem** (mēs'ōflō'ēm, mēz-) *n.* [Gk. *mesos*, middle; *phloios*, smooth bark.] Middle or green bark; mesophloeum.

**mesophragma** (mēs'ōfrāg'mā, mēz-) *n.* [Gk. *mesos*, middle; *phragma*, fence.] A chitinous piece descending into interior of insect body with post-scutellum for base; *M* or Hensen's line, *q.v.*

**mesophryon** (mēs'ōf'rion, mēz-) *n.* [Gk. *mesos*, middle; *ophrys*, eyebrow.] The elevated median head-region of trilobites.

**mesophyll** (mēs'ōfil, mēz-) *n.* [Gk. *mesos*, middle; *phyllon*, leaf.] The internal parenchyma of a leaf.

**mesophyte** (mēs'ōfit, mēz-) *n.* [Gk. *mesos*, middle; *phyton*, plant.] A plant thriving in temperate climate with normal amount of moisture.

**mesoplankton** (mēs'ōplāng'ktōn, mēz-) *n.* [Gk. *mesos*, middle; *planktos*, wandering.] Drifting animal and plant life from a hundred fathoms downwards; drifting organisms of medium size; cf. megaloplankton, microplankton, nanoplankton.

**mesoplast** (mēs'ōplāst, mēz-) *n.* [Gk. *mesos*, middle; *plastos*, moulded.] A cell nucleus.

**mesoplastic** (mēs'ōplās'tik, mēz-) *a.* [Gk. *mesos*, middle; *plastos*, moulded.] Having a normal or average form; mesomorphic; *appl.* constitutional type.

**mesoplastron** (mēs'ōplās'trōn, mēz-) *n.* [Gk. *mesos*, middle; F. *plastron*, breast-plate.] Plate between hyo- and hypo-plastron of certain turtles.

**mesopleurite** (mēs'ōploō'rīt, mēz-) *n.* [Gk. *mesos*, middle; *pleura*, side.] Lateral mesothoracic sclerite, as in Diptera.

**mesopleuron** (mēs'ōploō'rōn, mēz-) *n.* [Gk. *mesos*, middle; *pleura*, side.] A lateral part of insect mesothorax; a mesopleurite

**mesopodial** (mēs'ōpō'diāl, mēz-) *a.* [Gk. *mesos*, middle; *pous*, foot.] *Pert.* a mesopodium.

**mesopodium** (mēs'ōpō'diūm, mēz-) *n.* [Gk. *mesos*, middle; *pous*, foot.] Leaf-stalk or petiole region of leaf; middle part of molluscan foot; the metacarpus or metatarsus.

**mesopraescutum** (mēs'ōprēskū'tūm, mēz-) *n.* [Gk. *mesos*, middle; L. *prae*, before; *scutum*, shield.] Praescutum of mesothorax in insects.

**mesopterygium** (mēs'ōtērj'ium, mēz-) *n.* [Gk. *mesos*, middle; *pterygion*, little wing or fin.] The middle of three basal pectoral fin-cartilages in recent elasmobranchs.

**mesopterygoid** (mēs'ōtēr'igoid, mēz-) *n.* [Gk. *mesos*, middle; *pteryx*, wing; *eidos*, form.] The middle of three pterygoid bone elements of teleosts; the ectopterygoid.

**mesoptile** (mēs'ōtil, mēz-, -ptil) *n.* [Gk. *mesos*, middle; *ptilon*, feather.] Prepenna following proptile and succeeded by metaptile or by teleoptile.

**mesorchium** (mēs'ōr'kiūm, mēz-) *n.* [Gk. *mesos*, middle; *orchis*, testicle.] Mesentery supporting testis.

**mesorectum** (mēs'ōrēk'tūm, mēz-) *n.* [Gk. *mesos*, middle; L. *rectus*, straight.] Mesentery supporting rectum.

**mesorhinal** (mēs'ōri'nāl, mēz-) *a.* [Gk. *mesos*, middle; *rhis*, nose.] Between nostrils.

**mesorhinium** (mēs'ōr'n'ium, mēz-) *n.* [Gk. *mesos*, middle; *rhis*, nose.] The internarial surface region of a bird's bill.

**mesosalpinx** (mēs'ōsāl'pīngks, mēz-) *n.* [Gk. *mesos*, middle; *salpingx*, trumpet.] The portion of broad ligament enclosing uterine tube.

**mesoscapula** (mēs'ōskāp'ulā, mēz-) *n.* [Gk. *mesos*, middle; L. *scapula*, shoulder-blade.] Scapular spine.

**mesoscutellum** (mēs'ōskūtēl'ūm, mēz-) *n.* [Gk. *mesos*, middle; L. *scutellum*, small shield.] Scutellum of insect mesothorax.

**mesoscutum** (mēs'ōskū'tūm, mēz-) *n.* [Gk. *mesos*, middle; L. *scutum*, shield.] Scutum of insect mesothorax.

**mesosoma** (mēs'ōsō'mā, mēz-) *n.* [Gk. *mesos*, middle; *soma*, body.] Middle part of body; praeadomen of Arthropoda.

**mesosome** (mēs'ōsōm, mēz-) *n.* [Gk. *mesos*, middle; *soma*, body.] A phallosome, *q.v.*

**mesosperm** (mēs'ōspērīn, mēz-) *n.* [Gk. *mesos*, middle; *sperma*, seed.] Integument investing nucellus of ovule.

**mesospore** (mēs'ōspōr, mēz-), **mesosporium** (mēs'ōspō'rīūm, mēz-) *n.* [Gk. *mesos*, middle; *sporos*, seed.] The intermediate of three spore coats; a unicellular teleutospore in certain rust fungi; a resting-spore stage.

**mesostate** (mēs'ōstāt, mēz-) *n.* [Gk. *mesos*, middle; *stasis*, standing.] Intermediate stage in metabolism.

**mesostereom** (mēs'ōstēr'ēōm, mēz-) *n.* [Gk. *mesos*, middle; *stereos*, solid.] The middle layer of thecal plates of Cystidea.

**mesosternebra** (mēs'ōstēr'nēbrā, mēz-) *n.* [Gk. *mesos*, middle; *sternon*, breast-bone.] A part of developing mesosternum.

**mesosternum** (mēs'ōstēr'nūm, mēz-) *n.* [Gk. *mesos*, middle; *L. sternum*, breast-bone.] Middle part of sternum of vertebrates; gladiolus; sternum of mesothorax of insects; mesosternal area, episternum of mesothorax, or meskatepisternum of Diptera.

**mesostethium** (mēs'ōstē'thīūm, mēz-) *n.* [Gk. *mesos*, middle; *stethos*, chest.] A mesosternum.

**mesostylous** (mēs'ōstī'lūs, mēz-) *a.* [Gk. *mesos*, middle; *stylos*, pillar.] Having styles of intermediate length; *appl.* heterostylous flowers.

**mesotarsal** (mēs'ōtār'sāl, mēz-) *a.* [Gk. *mesos*, middle; *L. tarsus*, ankle-joint.] *Pert.* mesotarsus.

**mesotarsus** (mēs'ōtār'sūs, mēz-) *n.* [Gk. *mesos*, middle; *L. tarsus*, ankle-joint.] A middle-limb tarsus of insects.

**mesotergum** (mēs'ōtēr'gūm, mēz-) *n.* [Gk. *mesos*, middle; *L. tergum*, back.] Median arched portion or axis of trilobite body.

**mesothecium** (mēs'ōthē'siūm, mēz-) *n.* [Gk. *mesos*, middle; *theke*, cup.] The middle investing layer of an anther-sac.

**mesothelium** (mēs'ōthē'llūm, mēz-)

*n.* [Gk. *mesos*, middle; *thele*, nipple.] Mesoderm bounding primitive coelom and giving rise to muscular and connective tissue.

**mesotherm** (mēs'ōthērm, mēz-) *n.* [Gk. *mesos*, middle; *therme*, heat.] Plant thriving in moderate heat.

**mesothoracic** (mēs'ōthōrās'ik, mēz-) *a.* [Gk. *mesos*, middle; *thorax*, chest.] *Pert.* or in region of mesothorax; *appl.* a spiracle, of insects.

**mesothorax** (mēs'ōthō'rāks, mēz-) *n.* [Gk. *mesos*, middle; *thorax*, chest.] The middle segment of thoracic region of insects.

**mesotic** (mēs'ō'tik, mēz-) *a.* [Gk. *mesos*, middle; *ous*, ear.] *Appl.* paired chondrocranial cartilages in birds, between parachordal and acrochordal; also basiotic.

**mesotriaene** (mēs'ōtri'ēn, mēz-) *n.* [Gk. *mesos*, middle; *triaina*, trident.] Aberrant type of triaene spicule.

**mesotrochal** (mēs'ōt'rokāl, mēz-) *a.* [Gk. *mesos*, middle; *trochos*, wheel.] *Appl.* an annulate larva with circlet of cilia round middle of body.

**mesotrophic** (mēs'ōtrōf'ik, mēz-) *a.* [Gk. *mesos*, middle; *trophe*, nourishment.] Mixotrophic, *q.v.*; providing a moderate amount of nutrition, *appl.* environment.

**mesotympanic** (mēs'ōtīmpān'ik, mēz-) *n.* [Gk. *mesos*, middle; *tympanon*, drum.] Symplectic; a bone in suspensory apparatus of lower jaw in fishes.

**mesovarium** (mēs'ōvā'rīūm, mēz-) *n.* [Gk. *mesos*, middle; *L. ovarium*, ovary.] Mesentery of ovary; suspensory mesentery in fishes.

**mesoventral** (mēs'ōvēn'trāl, mēz-) *a.* [Gk. *mesos*, middle; *L. venter*, belly.] In middle ventral region.

**Mesozoic** (mēs'ōzō'ik, mēz-) *a.* [Gk. *mesos*, middle; *zoe*, life.] *Appl.* or *pert.* secondary geological era, the age of reptiles.

**messtome** (mēs'tōm) *n.* [Gk. *messtos*, filled.] A vascular bundle, including hadrome and leptome.

**metabiosis** (mēt'ābiō'sis) *n.* [Gk. *meta*, after; *biosis*, a living.] Condition in which one organism lives only after another has prepared its environment and has died.

**metabolic** (mēt'ābōl'ik) *a.* [Gk. *metabole*, change.] Changeable; *appl.* chemical changes occurring in the living organism; influencing metabolism, *appl.* hormones; formed during metabolism; metamorphosing.

**metabolin**,—metabolite, *q.v.*

**metabolism** (mētāb'ōlizm) *n.* [Gk. *metabole*, change.] The chemical change, constructive and destructive, occurring in living organisms.

**metabolite** (mētāb'ōlit) *n.* [Gk. *metabole*, change.] Any product of metabolism.

**metaboly** (mētāb'ōli) *n.* [Gk. *metabole*, change.] Change, particularly of shape, as in Eugleninae.

**metabranhial** (mēt'ābrāng'kiāl) *a.* [Gk. *meta*, after; *branchia*, gills.] *Pert.* or in region of posterior gill region.

**metacarpal** (mēt'ākār'pāl) *a.* [Gk. *meta*, after; *karpōs*, wrist.] *Pert.* metacarpus; *appl.* bones, articulations, etc. *n.* A primary wing-quill in the metacarpal region.

**metacarpophalangeal** (mēt'ākār'pō-fālān'jēāl) *a.* [Gk. *meta*, after; *karpōs*, wrist; *phalangx*, series.] *Appl.* articulations between metacarpals and phalanges.

**metacarpus** (mēt'ākār'pūs) *n.* [Gk. *meta*, after; *karpōs*, wrist.] The skeletal part of hand between wrist and fingers, consisting typically of five cylindrical bones.

**metacentric** (mēt'āsēn'trik) *a.* [Gk. *meta*, among; *kentron*, centre.] Having the centromere at or near the middle, *appl.* chromosomes; *cf.* acrocentric, telocentric. *n.* A metacentric or V-shaped chromosome; isochromosome.

**metacercaria** (mēt'āsērkā'riā) *n.* [Gk. *meta*, after; *kerkos*, tail.] A cercaria after encystment; adolecercaria.

**metacestode** (mēt'āsēs'tōd) *n.* [Gk. *meta*, after; *kestos*, girdle; *eidōs*, form.] Bladder-worm, encysted stage of a cestode; plerocystoid; plerocercoid.

**metachromas-y, ie** (mēt'ākro'māsi) *n.* [Gk. *meta*, change of; *chroma*, colour.] Condition of certain tissues and cell components which, treated with basic aniline stains, show other than the fundamental colour constituent.

**metachromatic** (mēt'ākro'māt'ik) *a.* [Gk. *meta*, change of; *chroma*, colour.] *Appl.* substances characterised by metachromasy; *appl.* granules of reserve food substances which stain with basic dyes, in bacteria and algal cells.

**metachromatinic grains**,—chromatoid bodies found in cells, very similar to chromatin in properties and characteristics.

**metachromy** (mēt'ākro'mi) *n.* [Gk. *meta*, change of; *chroma*, colour.] Change in colour, as of flowers.

**metachrosis** (mēt'ākro'sis) *n.* [Gk. *meta*, change of; *chrosis*, colouring.] Ability to change skin colour by expansion or contraction of pigment cells.

**metacneme** (mēt'āknēmē) *n.* [Gk. *meta*, after; *kneme*, tibia.] A secondary mesentery of Zoantharia.

**metacoel** (mēt'āsēl) *n.* [Gk. *meta*, after; *koilos*, hollow.] The posterior part of coelom of molluscs; anterior extension of fourth ventricle of brain.

**metacone** (mēt'ākōn) *n.* [Gk. *meta*, after; *konos*, cone.] Postero-external cusp of upper molar.

**metaconid** (mēt'ākō'nid) *n.* [Gk. *meta*, after; *konos*, cone.] Postero-internal cusp of lower molar.

**metaconule** (mēt'ākō'nul) *n.* [Gk. *meta*, after; *konos*, cone.] Posterior secondary cusp of upper molar.

**metacoracoid** (mēt'ākōr'ākoid) *n.* [Gk. *meta*, after; *korax*, crow; *eidōs*, form.] Posterior part of coracoid.

- metacromion** (mēt'āk'rō'miōn) *n.* [Gk. *meta*, after; *akros*, summit; *omas*, shoulder.] Posterior branch-process of acromion-process of scapular spine.
- metacyclic** (mēt'ās'k'lik) *a.* [Gk. *meta*, after; *kyklos*, circle.] *Appl.* final infective forms, of certain parasitic protozoa, which pass on to next host.
- metadiscoidal** (mēt'ād'iskoid'āl) *a.* [Gk. *meta*, after; *diskos*, disc; *eidos*, form.] *Appl.* placenta in which villi are at first scattered and later restricted to a disc, as in man and monkeys.
- metadromous** (mētād'rōmūs) *a.* [Gk. *meta*, after; *dromos*, running.] With primary veins of segment arising from upper side of mid-rib.
- meta-episternum**,—metepisternum, *q.v.*
- metæsthetism** (mēt'ēsthē'tizm) *n.* [Gk. *meta*, after; *aisthetos*, perceptible by senses.] Doctrine that "consciousness is a product of evolution of matter and force."
- metagastric** (mēt'ägās'trik) *a.* [Gk. *meta*, after; *gaster*, stomach.] *Pert.* posterior gastric region.
- metagastrula** (mēt'ägās'troolā) *n.* [Gk. *meta*, after; *gaster*, stomach.] A modified form of gastrula.
- metagenesis** (mēt'ājēn'esis) *n.* [Gk. *meta*, after; *genesis*, descent.] Alternation of sexual and asexual generations; *cf.* heterogenesis.
- metagyny** (mētāj'ini, mēt'āgī'ni) *n.* [Gk. *meta*, afterwards; *gyne*, female.] Protandry.
- metakinesis** (mēt'ākīnē'sis) *n.* [Gk. *meta*, after; *kinein*, to move.] Middle stage of mitosis, during which chromosomes are grouped in equatorial plate; movement of chromosomes between prophase and metaphase.
- metallic** (mētāl'ik) *a.* [Gk. *metallon*, mine.] Iridescent; *appl.* colours due to interference by fine striae or thin lamellae, as in insects.
- metalph** (mēt'ālōf) *n.* [Gk. *meta*, after; *lophos*, crest.] The posterior crest of a molar, uniting metacone, metaconule, and hypocone.
- metamere** (mēt'āmēr) *n.* [Gk. *meta*, after; *meros*, part.] A body segment.
- metameric** (mēt'āmēr'ik) *a.* [Gk. *meta*, after; *meros*, part.] *Pert.* metamerism or segmentation.
- metamerised** (mēt'āmérizd) *a.* [Gk. *meta*, after; *meros*, part.] Segmented.
- metamerism** (mēt'āmērizm) *n.* [Gk. *meta*, after; *meros*, part.] The condition of a body divided up into segments more or less alike; segmentation; zonal symmetry.
- metamitosis** (mēt'āmītō'sis) *n.* [Gk. *meta*, after; *mitos*, thread.] Mitosis in which cytoplasmic and nuclear elements are both affected; *cf.* mesomitosis.
- metamorphosis** (mēt'āmōr'fōsis) *n.* [Gk. *meta*, change of; *morphe*, form.] Change of form and structure undergone by an animal from embryo to adult stage, as in insects; transformation of one structure into another, as of stamens into petals; interference with normal symmetry in flowers; internal chemical change.
- metamps** (mēt'āmps) *n. plu.* [Gk. *meta*, change of; *morphe*, form.] Different forms of same species, as in certain sponges.
- metamyelocyte** (mētāmī'ēlōsit) *n.* [Gk. *meta*, beyond; *myelos*, marrow; *kytos*, hollow.] A myelocyte with horseshoe-shaped nucleus before transformation into a leukocyte.
- metanauplius** (mēt'ānōp'liūs) *n.* [Gk. *meta*, after; *L. nauplius*, kind of shell-fish.] Larval stage of Crustacea, succeeding nauplius stage.
- metandry** (mētān'dri) *n.* [Gk. *meta*, after; *aner*, male.] Meroandry with retention of posterior pair of testes only, *opp.* proandry; protogyny, *opp.* protandry.
- metanephric** (mēt'ānēf'rik) *a.* [Gk. *meta*, after; *nephros*, kidney.] *Pert.* or in region of hind-kidney.

**metanephros** (mēt'ănēf'rōs) *n.* [Gk. *meta*, after; *nephros*, kidney.] The organ arising behind mesonephros and replacing it as functional kidney of fully-developed Amniota.

**metanotum** (mēt'ănō'tūm) *n.* [Gk. *meta*, after; *noton*, back.] Notum or tergum of insect metathorax.

**metanucleus** (mēt'ănū'klēūs) *n.* [Gk. *meta*, after; L. *nucleus*, kernel.] Egg-nucleolus after extrusion from germinal vesicle.

**metapeptone** (mēt'ăpēp'tōn) *n.* [Gk. *meta*, after; *peptos*, digested.] A product of action of gastric juice on albumins.

**metaphase** (mēt'ăfāz) *n.* [Gk. *meta*, after; *phainein*, to appear.] The stage in mitosis or meiosis in which chromosomes are split up in equatorial plate.

**metaphery** (mētăf'eri) *n.* [Gk. *meta*, beyond; *pherein*, to bear.] Displacement of organs.

**metaphloem** (mēt'ăflō'ēm) *n.* [Gk. *meta*, after; *phloos*, inner bark.] The phloem of secondary xylem.

**metaphragma** (mēt'ăfrăg'mă) *n.* [Gk. *meta*, after; *phragma*, fence.] An internal metathoracic septum in insects.

**metaphysis** (mētăf'isis) *n.* [Gk. *meta*, besides; *physis*, growth.] Paraphysis, *q.v.*, of fungi.

**metaphyte** (mēt'ăfit) *n.* [Gk. *meta*, after; *phyton*, plant.] A multicellular plant, *opp.* protophyte.

**metaplasia** (mēt'ăplă'siă) *n.* [Gk. *meta*, change of; *plasis*, moulding.] Conversion of tissue from one form to another, as in ossification.

**metaplasis** (mētăp'lăsis) *n.* [Gk. *meta*, after; *plasis*, moulding.] The mature period in life of an individual.

**metaplasm** (mēt'ăplăzm) *n.* [Gk. *meta*, after; *plasma*, mould.] Lifeless or ergastic ingredients of protoplasm, *opp.* to living material or organoids.

**metaplastic** (mēt'ăplăs'tik) *a.* [Gk. *meta*, after; *plastos*, moulded.] *Pert.* metaplasia; *pert.* metaplasm.

**metaplastic or metaplastic bodies**, —grains of protoplasm which are stages or products of metabolism and not true protoplasm.

**metapleural** (mēt'ăploō'răl) *a.* [Gk. *meta*, after; *pleura*, side.] Posteriorly and laterally situated; *pert.* metapleure; *pert.* metapleuron.

**metapleure** (mēt'ăploor) *n.* [Gk. *meta*, after; *pleura*, side.] An abdominal or ventro-lateral fold of integument of certain primitive Chordata.

**metapleuron** (mēt'ăploor'ōn) *n.* [Gk. *meta*, after; *pleura*, side.] The pleuron of insect metathorax.

**metapneustic** (mēt'ănū'stik, -pnū'-) *a.* [Gk. *meta*, after; *pneuma*, breath.] *Appl.* insect larvae with only the terminal pair of spiracles.

**metapodeon** (mēt'ăpōd'ēōn), **metapodeum** (mēt'ăpō'dēūm) *n.* [Gk. *meta*, after; *pous*, foot.] That part of insect abdomen behind petiole or podeon.

**metapodial** (mēt'ăpō'diăl) *a.* [Gk. *meta*, after; *pous*, foot.] *Pert.* a metapodeon or metapodium.

**metapodium** (mēt'ăpō'diūm) *n.* [Gk. *meta*, after; *pous*, foot.] Posterior portion of molluscan foot; portion of foot between tarsus and digits; in four-footed animals, metacarpus and metatarsus.

**metapodosoma** (mēt'ăpōdōsō'mă) *n.* [Gk. *meta*, after; *pous*, foot; *soma*, body.] Body region bearing third and fourth pair of legs in Acarina.

**metapolar cells**,—second circlet of cells of polar cap of rhombogen of Rhombozoa.

**metapophysis** (mēt'ăpōf'isis) *n.* [Gk. *meta*, after; *apo*, from; *phyein*, to grow.] A prolongation of a vertebral articular process developed in certain vertebrates; mammillary process.

**metapore** (mēt'ăpōr) *n.* [Gk. *meta*, after; *poros*, channel.] The medial aperture in roof of fourth ventricle of brain; Magendie's foramen.

**metapostscutellum** (mēt'āpōst'skū-tēl'ūm) *n.* [Gk. *meta*, after; L. *post*, after; *scutellum*, small shield.] Postscutellum of insect metathorax.

**metapraescutum** (mēt'āprēskū'tūm) *n.* [Gk. *meta*, after; L. *prae*, before; *scutum*, shield.] Praescutum of insect metathorax.

**metapterygium** (mēt'ātērij'ūm) *n.* [Gk. *meta*, after; *pterygion*, little wing.] The posterior basal fincartilage, pectoral or pelvic, of recent elasmobranchs.

**metapterygoid** (mēt'ātēr'īgoid) *n.* [Gk. *meta*, after; *pteryx*, wing; *eidos*, form.] Posterior of three pterygoid elements in certain lower vertebrates.

**metaptile** (mēt'ātil, -ptil) *n.* [Gk. *meta*, after; *ptilon*, feather.] A plumose penna or feather; *cf.* mesoptile, teleoptile.

**metarachis** (mēt'ārā'kīs) *n.* [Gk. *meta*, after; *rhachis*, spine.] Face of Pennatulacea which coincides with sulcar aspect of terminal zooid—so-called dorsal surface.

**metascutellum** (mēt'āskūtēl'ūm) *n.* [Gk. *meta*, after; L. *scutellum*, small shield.] Scutellum of insect metathorax.

**metascutum** (mēt'āskū'tūm) *n.* [Gk. *meta*, after; L. *scutum*, shield.] Scutum of insect metathorax.

**metasitism** (mēt'āsītizm) *n.* [Gk. *meta*, after; *sitos*, food.] A cannibalistic mode of life.

**metasoma** (mēt'āsō'mā) *n.* [Gk. *meta*, after; *soma*, body.] The six terminal segments of opisthosoma of Eurypterida; posterior body-region of Arachnoidea; postabdomen; abdomen, as of woodlice.

**metasomatic** (mēt'āsōmāt'ik) *a.* [Gk. *meta*, after; *soma*, body.] *Pert.* or situated in metasoma.

**metasperm** (mēt'āspēr'm) *n.* [Gk. *meta*, after; *sperma*, seed.] A plant having seeds in a closed ovary; an angiosperm.

**metasporangium** (mēt'āspōrān'jium) *n.* [Gk. *meta*, after; *sporos*, seed; *angeion*, vessel.] A sporangium

containing resting spores, as in Bacillaceae.

**metastasis** (mētās'tāsīs) *n.* [Gk. *metastasis*, removal.] Metabolism; transference of function from one organ to another; transport of bacteria by the circulatory system.

**metastatic life history**,—that of certain Trematoda in which the young form, after entering intermediate host, metamorphoses into adult, after which intermediate host is swallowed by final host.

**metasternum** (mēt'āstēr'nūm) *n.* [Gk. *meta*, after; L. *sternum*, breastbone.] The sternum of insect metathorax; posterior sternal part, or xiphisternum, of Anura; xiphoid or ensiform process, posterior part of sternum of higher vertebrates.

**metasthenic** (mēt'āsthēn'ik) *a.* [Gk. *meta*, after; *sthenos*, strength.] With well-developed posterior part of body.

**metastigmate** (mēt'āstīg'māt) *a.* [Gk. *meta*, after; *stigma*, mark.] Having posterior tracheal openings or stigmata, as in mites.

**metastoma** (mēt'āstō'mā) *n.* [Gk. *meta*, after; *stoma*, mouth.] The two-lobed lower lip of Crustacea; 'hypopharynx' of Myriopoda; median plate behind mouth in Palaeostraca; metastome.

**metastucture** (mēt'āstrūk'tūr) *n.* [Gk. *meta*, after; L. *struere*, to build.] Ultramicroscopic organisation.

**metasyndesis** (mēt'āsīn'desis) *n.* [Gk. *meta*, after; *syndesis*, bond.] Telosyndesis, *q.v.*

**metatarsal** (mēt'ātār'sāl) *a.* [Gk. *meta*, after; L. *tarsus*, ankle.] In region of metatarsus; *appl.* arteries, veins, etc.; *pert.* metatarsal bones.

**metatarsophalangeal** (mēt'ātār'sō-fālān'jeāl) *a.* [Gk. *meta*, after; L. *tarsus*, ankle; Gk. *phalangx*, troop.] *Appl.* articulations between metatarsus and phalanges of foot.

**metatarsus** (mēt'ātār'sūs) *n.* [Gk. *meta*, after; L. *tarsus*, ankle.] Part of foot between tarsus and toes; first joint of tarsus in insects; first dactylopodite or basitarsus in spiders.

**metathalamus** (mēt'áthāl'ámūs) *n.* [Gk. *meta*, after; *thalamos*, chamber.] The geniculate bodies of the thalamencephalon.

**metatherian** (mēt'áthē'riān) *a.* [Gk. *meta*, beyond; *therion*, small animal.] *Appl.* marsupials, with short-term placenta and later development in marsupium.

**metathetely** (mēt'áthēt'éli) *n.* [Gk. *metathein*, to run behind; *telos*, completion.] Hysterotely.

**metathorax** (mēt'áthō'rāks) *n.* [Gk. *meta*, after; *thorax*, chest.] Posterior segment of insect thorax.

**metatracheal** (mēt'átrā'kēāl) *a.* [Gk. *meta*, between; L.L. *trachia*, windpipe.] *Appl.* wood, with xylem parenchyma located independently of the vessels.

**metatroch** (mēt'átrōk) *n.* [Gk. *meta*, after; *trochos*, wheel.] In a trochophore, a circular band of cilia behind the mouth.

**metatrophic** (mēt'átrōf'ík) *a.* [Gk. *meta*, change of; *trophē*, nourishment.] Living on both nitrogenous and carbonaceous organic matter.

**metatympanic**,—entotympanic, *q.v.*

**metatype** (mēt'átip) *n.* [Gk. *meta*, after; *typos*, image.] A topotype of the same species as the holotype or lectotype.

**metaxenia** (mēt'ázē'niā) *n.* [Gk. *meta*, after; *xenia*, gifts.] Physiological effect of pollen upon maternal tissue.

**metaxylem** (mēt'āzī'lēm) *n.* [Gk. *meta*, after; *xylon*, wood.] Secondary xylem with many thick-walled cells.

**metazoea** (mēt'ázōē'ā) *n.* [Gk. *meta*, after; *zoe*, life.] A larval stage of Crustacea between zoea and megalopa stages.

**metazonite** (mēt'āzōnīt) *n.* [Gk. *meta*, after; *zone*, girdle.] The posterior ring of a diplosomite. *Opp.* prozonite.

**metazoon** (mēt'ázō'ōn) *n.* [Gk. *meta*, after; *zoon*, animal.] A multicellular animal; metazoan.

**metembryo** (mētēm'brīō) *n.* [Gk.

*meta*, towards; *embryon*, embryo.] The gastrula.

**metencephalon** (mēt'ēnkēf'ālōn, -sēf-) *n.* [Gk. *meta*, after; *en*, in; *kephale*, head.] Part of hind-brain, consisting of cerebellum, pons, and intermediate part of fourth ventricle; or hind-brain.

**metenteron** (mētēn'tērōn) *n.* [Gk. *meta*, after; *enteron*, gut.] Intermesenteric chamber of sea-anemone or other coelenterate.

**metepimeron** (mēt'ēpīmē'rōn) *n.* [Gk. *meta*, after; *epi*, upon; *meros*, upper thigh.] Epimeron of insect metathorax.

**metepisternum** (mēt'ēpistēr'nūm) *n.* [Gk. *meta*, after; *epi*, upon; *sternon*, breast-bone.] Episternum of insect metathorax; metaepisternum.

**metestrus**,—metoestrus, *q.v.*

**methaemoglobin** (mēt-hē'mōglō'bīn) *n.* [Gk. *meta*, after; *haima*, blood; L. *globus*, globe.] An oxidation product of haemoglobin; HbO, HbOH.

**metochy** (mēt'ōkī) *n.* [Gk. *metoche*, sharing.] Relationship between a neutral guest insect and its host.

**metoecious** (mētē'siūs) *a.* [Gk. *meta*, after; *oikos*, house.] Metoxenous or heteroecious; with two hosts.

**metoestrus** (mētē'strūs) *n.* [Gk. *meta*, after; *oistros*, gadfly.] The luteal phase, period when activity subsides after oestrus; metoestrum.

**metope** (mēt'ōpē) *n.* [Gk. *metopon*, forehead.] The middle frontal portion of a crustacean.

**metopic** (mētōp'ík) *a.* [Gk. *metopon*, forehead.] *Pert.* forehead; *appl.* frontal suture.

**metopion** (mētō'pīōn) *n.* [Gk. *metopion*, forehead.] Point on forehead where mid-sagittal plane intersects line connecting frontal eminences.

**metosteon** (mētōs'tēōn) *n.* [Gk. *meta*, after; *osteon*, bone.] A posterior sternal ossification in birds.

**metovum** (mētō'vūm) *n.* [Gk. *meta*, after; L. *ovum*, egg.] An egg-cell surrounded by nutritive material.

**metoxenous** (mētōx'ēnūs) *a.* [Gk.



- meta*, after; *xenos*, guest.] Parasitic on different hosts at different stages in life-history.
- metraterm** (mē'trätér'm) *n.* [Gk. *metra*, womb; *terma*, end.] Terminal portion of uterus in trematodes.
- metula** (mē'tülä) *n.* [*Dim.* of *L. meta*, end-post.] A spore-bearing branch having flask-shaped outgrowths, as in certain fungi.
- M-factor**,—a certain antigen in erythrocytes of higher animals.
- micella** (mī'sēl'ä) *n.* [*L. dim.* of *mica*, morsel.] Hypothetical unit, *q.v.*; an orderly aggregate of chain-like molecules.
- microaesthetes** (mīkrēsthē'tēz) *n. plu.* [Gk. *mikros*, small; *aisthetes*, perceiver.] The smaller sensory organs of Placophora.
- micraner** (mīkrä'nēr) *n.* [Gk. *mikros*, small; *aner*, male.] A dwarf male ant.
- micrergate** (mīkrēr'gāt) *n.* [Gk. *mikros*, small; *ergates*, worker.] A dwarf worker ant.
- micro-aerophiles**,—organisms requiring less oxygen than is present in the air.
- microbe** (mī'krōb) *n.* [Gk. *mikros*, small; *bios*, life.] A bacterium; a micro-organism.
- microbiology** (mī'krōbīōl'ōjī) *n.* [Gk. *mikros*, small; *bios*, life; *logos*, discourse.] Biology of microscopic organisms.
- microblast** (mī'krōbläst) *n.* [Gk. *mikros*, small; *blastos*, bud.] An erythroblast smaller than normal.
- microcaltrops** (mī'krōkāl'trōps) *n.* [Gk. *mikros*, small; A.S. *coltraeppe*, kind of thistle.] A primitive tetraxon, or euaster with four persistent rays.
- microcentrum** (mī'krōsēn'trūm) *n.* [Gk. *mikros*, small; *kentron*, centre.] The dynamic centre of a cell, composed of centrosomes; kinetoneucleus.
- microcephalic** (mī'krōkēfāl'ik, -sēf-) *a.* [Gk. *mikros*, small; *kephale*, head.] With abnormally small head; having a cranial capacity of under 1350 c.c.; *cf.* megacephalic, mesocephalic.
- microchromosome** (mī'krōkrō'mō-sōm) *n.* [Gk. *mikros*, small; *chroma*, colour; *soma*, body.] A chromosome considerably smaller than the other chromosomes of the same type of nucleus; M-chromosome.
- microconidium** (mī'krōkōnid'īūm) *n.* [Gk. *mikros*, small; *konis*, dust; *idion*, *dim.*] A comparatively small conidium.
- microconjugant** (mī'krōkōn'joogānt) *n.* [Gk. *mikros*, small; *L. conjugare*, to unite.] A motile ciliated free-swimming conjugant or gamete which attaches itself to a macroconjugant and fertilises it.
- microcyst** (mī'krōsīst) *n.* [Gk. *mikros*, small; *kystis*, bladder.] A resting - spore stage of slime fungi.
- microcytase** (mī'krōsītās) *n.* [Gk. *mikros*, small; *kytos*, hollow.] The enzyme of microphages or smaller leucocytes.
- microcytes** (mī'krōsīts) *n. plu.* [Gk. *mikros*, small; *kytos*, hollow.] Blood-corpuscles about half the size of erythrocytes, numerous in diseased conditions.
- microdont** (mī'krōdōnt) *a.* [Gk. *mikros*, small; *odous*, tooth.] With comparatively small teeth.
- microevolution** (mī'krōēvölū'shūn) *n.* [Gk. *mikros*, small; *L. evolvere*, to unroll.] Evolutionary processes that can be noticed within a relatively brief period, as during a human life-time; evolution due to gene mutation and recombination. *Opp.* macro-evolution.
- microfilaria** (mī'krōflā'riā) *n.* [Gk. *mikros*, small; *L. filum*, thread.] The embryo of a Filaria.
- microgamete** (mī'krōgāmēt') *n.* [Gk. *mikros*, small; *gametes*, spouse.] The smaller of two conjugant gametes, regarded as male.
- microgametoblast** (mī'krōgāmē'tō-bläst) *n.* [Gk. *mikros*, small; *gametes*, spouse; *blastos*, bud.] Intermediate stage between microgametocyte and microgamete in certain Sporozoa.

**microgametocyte** (mī'krögāmē'tōsīt) *n.* [Gk. *mikros*, small; *gametes*, spouse; *kytos*, hollow.] Cell developed from merozoite in certain protozoa, giving rise to microgametes.

**microgametogenesis** (mī'krögāmē'tōjēn'ēsis) *n.* [Gk. *mikros*, small; *gametes*, spouse; *genesis*, descent.] Development of microgametes or spermatozoa.

**microgamy** (mīkrög'āmī) *n.* [Gk. *mikros*, small; *gamos*, marriage.] Syngamy between smallest individuals produced by fission or gemmation, as in Foraminifera; merogamy.

**microglia** (mīkrōgli'ā, mī'krōglē'ā) *n. plu.* [Gk. *mikros*, small; *glia*, glue.] Mesodermal phagocytic cells in grey and white nervous matter; mesoglia.

**microgonidium** (mī'krögōnid'ium) *n.* [Gk. *mikros*, small; *gonos*, offspring; *idion*, *dim.*] A comparatively small gonidium; a male gamont or gametocyte.

**microgyne** (mī'krōjīnē) *n.* [Gk. *mikros*, small; *gyne*, female.] Dwarf female ant.

**microhenad** (mī'krōhēn'ād) *n.* [Gk. *mikros*, small; *henas*, unit.] A filter-passer.

**microlecithal** (mī'krōlē's'ithāl) *a.* [Gk. *mikros*, small; *lekithos*, yolk.] Containing little yolk.

**microleucocyte** (mī'krōlū'kōsīt, -loo-) *n.* [Gk. *mikros*, small; *leukos*, white; *kytos*, hollow.] A small amoebocyte.

**micromere** (mī'krōmēr) *n.* [Gk. *mikros*, small; *meros*, part.] A cell of upper or animal hemisphere in meroblastic and other eggs.

**micromerozoite** (mī'krōmēr'ōzōīt) *n.* [Gk. *mikros*, small; *meros*, part; *zoon*, animal.] Cell derived from microsclerite and developing into gametocyte in Haemosporidia.

**micromesentery** (mī'krōmēs'entērī, -mēz-) *n.* [Gk. *mikros*, small; *mesos*, middle; *enteron*, gut.] A secondary incomplete mesentery in Zoantharia.

**micromutation** (mī'krōmūtā'shūn)

*n.* [Gk. *mikros*, small; L. *mutare*, to change.] Mutation at only one gene locus; genovariation, point mutation, transgenation.

**micromyelocyte** (mī'krōmī'ēlōsīt) *n.* [Gk. *mikros*, small; *myelos*, marrow; *kytos*, hollow.] A small heterophil myelocyte.

**micron** (mī'krōn) *n.* [Gk. *mikros*, small.] Micromillimetre, one-thousandth part of a millimetre; symbol:  $\mu$ .

**micronephridia** (mī'krōnēfrīd'ia) *n. plu.* [Gk. *mikros*, small; *nephros*, kidney; *idion*, *dim.*] Small nephridia; meronephridia.

**micront** (mī'krōnt) *n.* [Gk. *mikros*, small; *on*, being.] A small cell formed by schizogony, itself giving rise to microgametes.

**micronucleocyte** (mī'krōnū'klēōsīt) *n.* [Gk. *mikros*, small; L. *nucleus*, kernel; Gk. *kytos*, hollow.] An amoebocyte with a relatively small nucleus.

**micronucleus** (mī'krōnū'klēūs) *n.* [Gk. *mikros*, small; L. *nucleus*, kernel.] The smaller, reproductive nucleus of many protozoa, in close proximity to meganucleus; gononucleus.

**micro-nutrients**,—substances essential to health of organisms, but required in minute quantity; *e.g.* trace elements, *q.v.*

**micro-organism** (mī'krō-ōr'gānizm) *n.* [Gk. *mikros*, small; *organon*, instrument.] A microscopic organism; microbe; protist.

**microparasite** (mī'krōpār'āsīt) *n.* [Gk. *mikros*, small; *para*, beside; *siotos*, food.] A parasite of microscopic size.

**microphages** (mī'krōfā'jēz) *n. plu.* [Gk. *mikros*, small; *phagein*, to eat.] Chiefly the polymorphonuclear heterophil leucocytes.

**microphagic** (mī'krōfāj'ik) *a.* [Gk. *mikros*, small; *phagein*, to eat.] Feeding on minute organisms or particles, *appl.* protozoa; microphagous, feeding on small prey, *appl.* agnathous fishes. *Opp.* macrophagous.

**microphagocyte** (mī'krōfäg'ōsīt) *n.* [Gk. *mikros*, small; *phagein*, to eat; *kytos*, hollow.] A microphage or small phagocyte of blood.

**microphanerophyte** (mī'krōfān'erō-fit) *n.* [Gk. *mikros*, small; *phaneros*, manifest; *phyton*, plant.] Tree or shrub from 2 to 8 metres in height.

**microphil** (mī'krōfil) *a.* [Gk. *mikros*, small; *philein*, to love.] Tolerating only a narrow range of temperature, *appl.* certain bacteria; microphilic. *n.* Microphile.

**microphyllous** (mī'krōfil'ūs) *a.* [Gk. *mikros*, small; *phyllon*, leaf.] With small leaves.

**microphyte** (mī'krōfit) *n.* [Gk. *mikros*, small; *phyton*, plant.] A microscopic plant.

**microphytology** (mī'krōfitōl'ōji) *n.* [Gk. *mikros*, small; *phyton*, plant; *logos*, discourse.] Science of microphytes; bacteriology.

**microplankton** (mī'krōplāng'ktōn) *n.* [Gk. *mikros*, small; *planktos*, wandering.] Small organisms drifting with the surrounding water, somewhat larger than those of nanoplankton, *q.v.*

**micropodous** (mīkrōp'ōdūs) *a.* [Gk. *mikros*, small; *pous*, foot.] With rudimentary or small foot or feet.

**micropore** (mī'krōpōr) *n.* [Gk. *mikros*, small; *poros*, channel.] A small pore in a Chiton shell, containing a sense-organ.

**micropterism** (mīkrōp'tērīzm) *n.* [Gk. *mikros*, small; *pteron*, wing.] Condition of having unusually small wings, as in some insects.

**micropterous** (mīkrōp'tērūs) *a.* [Gk. *mikros*, small; *pteron*, wing.] Having small hind wings invisible till tegmina are expanded, as in some insects; with small or rudimentary fins.

**micropyle** (mī'krōpil) *n.* [Gk. *mikros*, small; *pyle*, gate.] Aperture for admission of pollen-tube at ovule apex; aperture between hilum and point of radicle; small opening in

cyst wall of macrogamete, for entry of microgamete; pore of oocyst; aperture in egg-membrane for admission of spermatozoon; pore in spongin-coat of sponges for escape of gemmules.

**micropyle apparatus**,—raised processes or porches, sometimes of elaborate structure, developed round micropyle of certain insect eggs.

**micropyrenic** (mī'krōpīrē'nīk) *a.* [Gk. *mikros*, small; *pyren*, fruit-stone.] With nuclei markedly smaller than average for the species or other group. *n.* A micropyrenic individual.

**microrhabdus** (mī'krōrāb'dūs) *n.* [Gk. *mikros*, small; *rhabdos*, rod.] Minute monaxon or rod-like spicule.

**microschizogony** (mī'krōskīzōg'ōnī) *n.* [Gk. *mikros*, small; *schizein*, to cleave; *gonos*, birth.] Schizogony resulting in small merozoites.

**microschizont** (mī'krōskīzōnt') *n.* [Gk. *mikros*, small; *schizein*, to cut; *onta*, beings.] A male schizont of certain protozoa.

**microsclere** (mī'krōsklē'r) *n.* [Gk. *mikros*, small; *skleros*, hard.] One of small spicules found lying scattered in tissues of sponges. *Opp.* megasclere.

**microseptum** (mī'krōsēp'tūm) *n.* [Gk. *mikros*, small; *L. septum*, partition.] An incomplete mesentery of Zoantharia.

**microsere** (mī'krōsēr) *n.* [Gk. *mikros*, small; *L. serere*, to put in a row.] A successional series of plant communities in a microhabitat.

**microsmatic** (mī'krōsmāt'ik) *a.* [Gk. *mikros*, small; *osme*, smell.] With feebly-developed sense of smell.

**microsome** (mī'krōsōm) *n.* [Gk. *mikros*, small; *soma*, body.] Granule of protoplasm as opposed to ground-substance; a minute particle, centre for enzyme localisation, in cytoplasm.

**microsorus** (mī'krōsōrūs) *n.* [Gk. *mikros*, small; *soros*, heap.] A sorus containing microsporangia, *opp.* megasorus.

**microspecies** (mī'krōspē'shēz) *n.* [Gk. *mikros*, small; L. *species*, particular kind.] A small species, or subspecies, with little variability; Jordanon.

**microsphere** (mī'krōsfēr) *n.* [Gk. *mikros*, small; *sphaira*, globe.] The initial chamber of Foraminifera when very small; centrosphere.

**microspheric** (mī'krōsfēr'ik) *a.* [Gk. *mikros*, small; *sphaira*, globe.] *Appl.* foraminifera when initial chamber of shell is small.

**microsplachnic** (mī'krōsplāngk'nik) *a.* [Gk. *mikros*, small; *splangch-non*, entrail.] Small-bodied and long-legged.

**microsporangium** (mī'krōspōrān'-jūm) *n.* [Gk. *mikros*, small; *sporos*, seed; *angeion*, vessel.] A sporangium bearing a number of microspores; pollen sac or anther lobe of phanerogams.

**microspore** (mī'krōspōr) *n.* [Gk. *mikros*, small; *sporos*, seed.] The spore developed in a microsporangium of heterosporous plants; the cell from which a pollen grain develops; a pollen grain; androspore; the smaller anisospore of Sarcodina.

**microsporocyte** (mī'krōspō'rōsit) *n.* [Gk. *mikros*, small; *sporos*, seed; *kytos*, hollow.] The pollen mother cell which produces microspores resulting from two meioses.

**microsporophore** (mī'krōspō'rōfōr) *n.* [Gk. *mikros*, small; *sporos*, seed; *pherein*, to bear.] A microsporangium.

**microsporophyll** (mī'krōspō'rōfil) *n.* [Gk. *mikros*, small; *sporos*, seed; *phyllon*, leaf.] A microsporangium-bearing leaf; stamen.

**microsporozyte** (mī'krōspō'rōzō'it) *n.* [Gk. *mikros*, small; *sporos*, seed; *zoon*, animal.] A smaller endogenous sporozoite of Sporozoa.

**microstome** (mī'krōstōm) *n.* [Gk. *mikros*, small; *stoma*, mouth.] A small opening or orifice.

**microstrobilus** (mī'krōstrōb'ilūs) *n.* [Gk. *mikros*, small; *strobilos*, cone.] A small cone, as in cycads.

**microstylospore** (mī'krōstī'lōspōr) *n.* [Gk. *mikros*, small; *stylos*, pillar; *sporos*, seed.] A comparatively small stylospore.

**microstylous** (mī'krōstīl'ūs) *a.* [Gk. *mikros*, small; *stylos*, pillar.] Having short styles; *appl.* heterostylous flowers.

**microtaxonomy** (mī'krōtāk'sōn'ōmī) *n.* [Gk. *mikros*, small; *taxis*, arrangement; *nomos*, law.] Classification and its principles as applied to subspecies, varieties, or races.

**microtherm** (mī'krōthērm) *n.* [Gk. *mikros*, small; *therme*, heat.] A plant of the cold temperate zone.

**microtrichia** (mī'krōtrīk'iā) *n. plu.* [Gk. *mikros*, small; *thrix*, hair.] Small hairs without basal articulation on insect wings.

**microtype** (mī'krōtip) *n.* [Gk. *mikros*, small; L. *typus*, type.] Normal mesentery arrangement of Anthozoa; *cf.* macrotype.

**microzoid** (mī'krōzō'id) *n.* [Gk. *mikros*, small; *zoon*, animal; *idion*, dim.] Male gamete, as in algae.

**microzooid** (mī'krōzō'oid) *n.* [Gk. *mikros*, small; *zoon*, animal; *eidōs*, form.] A free-swimming motile ciliated bud of Vorticella and other protozoa.

**microzoon** (mī'krōzō'ōn) *n.* [Gk. *mikros*, small; *zoon*, animal.] A microscopic animal.

**microzoospore** (mī'krōzō'ōspōr) *n.* [Gk. *mikros*, small; *zoon*, animal; *sporos*, seed.] Small planogamete; small anisospore of Radiolaria.

**microzyma** (mī'krōzī'mā) *n.* [Gk. *mikros*, small; *zyme*, leaven.] A hypothetical ultimate unit, *g.v.*

**microzyme** (mī'krōzīm) *n.* [Gk. *mikros*, small; *zyme*, leaven.] A micro-organism of fermenting or decomposing liquids.

**micton** (mīk'tōn) *n.* [Gk. *miktos*, mixed; *on*, being.] A species resulting from interspecific hybridisation and of which the individuals are interfertile.

**micturition** (mīk'tūrīsh'ūn) *n.* [L. *mingere*, to void water.] Act